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ABSTRACT

This paper reports the results of a study conducted to compare the locus of control orientation of the following Central Florida Community College (CFCC) groups: professional personnel (administrators, division directors, counselors, and teaching faculty); graduates; non-traditional, high-risk students; withdrawals; and students dropping two or more courses. Data for analysis was obtained as a result of the administration of the Adult form of the Nowicki-Strickland Internal-External (ANS-IE) Opinion Survey. Because of the limited response rates of certain study sub-groups, generalizations could be made only with regard to CFCC professional personnel (N=37) and high-risk students (N=40). Results of the study indicated that CFCC professional personnel had considerably higher internal locus of control orientation than did the total sample of high-risk students. Further, CFCC personnel had higher internal locus of control scores than did all student respondents. Communication of the concept of locus of control to college professional personnel and utilization of techniques designed to facilitate student development of internal locus of control orientation were recommended. Tables break down the data by age, sex, and race, and the scale is appended. (Author/JDS)

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A COMPARATIVE STUDY OF THE LOCUS OF CONTROL ORIENTATION OF GRADUATES, ADMINISTRATORS, COUNSELORS, TEACHING FACULTY, HIGH-RISK STUDENTS, AND DROPOUTS

by

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Central Florida Community College

A PRACTICUM PRESENTED TO NOVA UNIVERSITY
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ABSTRACT

Using results of the Adult form of the Nowicki-Strickland Internal-External Opinion Survey (ANS-IE), this study attempted to compare the locus of control orientation of the following Central Florida Community College groups: professional personnel (administrators, division directors, counselors, and teaching faculty); graduates; nontraditional, high-risk students; withdrawals; and students dropping two or more courses. Considering percentages of responses to the appeal for participation, valid generalizations could be made from the results of only two groups (CFCC personnel and high-risk students). Results proved CFCC personnel to have internal locus of control orientation considerably above that of the total sample of high-risk students and far above those in sub-samples studied (aged 17-20; by sex, aged 17-20; and by race, aged 17-20). An analysis of individual scores of all student respondents proved that CFCC personnel produced internal locus of control scores much higher than the great majority of student respondents. Recommendations made included (1) that the college sponsor a workshop to teach its professional personnel the concepts involved in locus of control and its impact on student expectancies of success or failure and to teach this personnel techniques by which to facilitate the development of an internal locus of control orientation of the external students served by the college; (2) that Basic Education Department faculty and CFCC counselors use the ANS-IE with new high-risk students to intensify their efforts to develop internality with these students; (3) that counselors offer special group sessions with externally-oriented high-risk students; (4) that counselors use the ANS-IE with all new students to identify those externally-oriented; (5) that counselors use the ANS-IE in personal counseling to determine if externality is instrumental in students' inability in solving problem situations in their lives; and (6) that, following the recommended workshop, all teaching faculty use the ANS-IE to determine the locus of control makeup of their classes in order to use appropriate techniques to facilitate success for all students.

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INTRODUCTION

A lack of "motivation" of students often has been cited as the cause of Central Florida Community College's high attrition rate, poor student performance, and low percentage of graduates. Through research, Roueche and Mink (1976) and many others have proved that one's locus of control orientation is instrumental in one's degree of success in academic performance and persistence.

> Counselors, instructors, and school administrators are beginning to realize that apparent lack of "motivation" seen in many students is due to an attitude on the student's part that he is not in control of his life. Such an attitude leads to a despairing, "Why try?" and presents the student as unmotivated. This apparent lack of effort to do well or try seems to be based on the student's feeling that other people or outside influences (school) control what happens to him, no matter how hard he tries to accomplish anything. (Roueche and Mink, 1976, p. 9).

The locus of control concept that is being incorporated more and more into learning theory and practice is a personality variable developed from J. B. Rotter's Social Learning Theory. "The locus of control variable is expressed on a continuum from external (control over pay-offs is seen by the learner to be outside of his control) to internal (the learner believes that through his behavior he can control pay-offs in his life)....an internal is a person who perceives that an event or reinforcement is contingent upon his behavior or his own characteristics; an external is a person who does not perceive the contingencies between his own behavior and outcomes." (Roueche and Mink, 1976, p. 10). (The locus of control theory is discussed more fully in the Background and Significance section of this report.)

This research practicum developed a comparative study of the locus of control orientation of seven CFCC sub-cultures as determined by responses to the Adult Form of the Nowicki-Strickland Internal-External Scale (ANS-IE), a

locus of control opinion survey. (A copy of the ANS-IE is found as Appendix A to this report.) The purpose of the study was to determine if the mean responses of CFCC professional personnel and a sample of its May, 1976, graduates showed more internality than did the mean responses of possibly less academically successful student samples. Assuming the locus of control concept to be valid relative to education, it was felt that such a study should be made to compare the locus of control orientations of various student sub-cultures served by these personnel. It was felt that if considerable differences existed between the internal-external orientations of CFCC personnel and any of the student groups, appropriate recommendations should be made to the college in order for it to take steps to serve all of its students better by helping those externally-oriented to develop greater self-directedness and to develop more internal locus of control orientation.

Members of seven CFCC sub-cultures were asked to complete the ANS-IE opinion survey on a voluntary, anonymous basis. The following CFCC professional personnel samples were included: administrators, academic division directors, counselors, and teaching faculty from each academic division -- Business and Social Sciences, Natural Sciences, Applied Sciences, and Fine Arts. In addition to a sample of May, 1976, graduates, samples of the following student groups were surveyed: students who had withdrawn from the college during Term II, 1975-76; students who had dropped two or more courses during Term II, 1975-76; and non-traditional, high-risk students who entered CFCC Term III-A, 1975-76, and were assigned to courses in the college's Basic Education Department. Means of internal and external responses for all groups surveyed were computed for comparison purposes. Data on all student groups surveyed was developed also with age group, race, and sex as further considerations for the study.

BACKGROUND AND SIGNIFICANCE

In a study of the works of learning theorists, a number of key concepts appears time and again. Concepts such as reinforcement, perception, aspiration, attitudes, behaviors, expectancy, self-direction, punishment, fear, anxiety, threat, need state --- all have been used, interpreted and researched. Each of these were brought together meaningfully in J. B. Rotter's Social Learning Theory, from which the personality variable locus of control was developed. (Rouche and Mink, 1976) Increasing numbers of educators are incorporating the locus of control concept into learning theory and practice. Concerned with the individual's taking control of his life -- and being taught the process by which it is possible --the locus of control concept has become a major factor in a trend toward helping persons develop a greater self-directedness. It emphasizes responsibility for one's own behavior.

The locus of control variable is not truly dichotomous, but, as stated in the Introduction to this report, "is expressed on a continuum from external (control over pay-offs is seen by the learner to be outside of his control) to internal (the learner believes that through his behavior he can control pay-offs in his life)." (Roueche and Mink, 1976, p.10) In citing the extremely large volume of the concept-related research which has verified the validity of Rotter's construct, Roueche and Mink (1976, page 10) point out, "Studies in general have shown that being 'internal' is a more positive personality trait than being 'external'....(internals) have a higher self-concept and are generally better adjusted, more independent, more achieving, more realistic in their aspirations, more open to new learning, more creative, more flexible, more self-reliant, show more initiative and effort in controlling the environment, are less anxious, have higher grades, show more

interest in intellectual achievement matters, etc. The external is on the less positive side of these variables."

The locus of control concept emphasizes responsibility for one's own behavior. The dependence of one's locus of control upon his reinforcement history, according to Roueche and Mink (1976, pp. 10,11), was one of Rotter's hypotheses, which sees one distinguishing when there are and are not causal relationships between events and therefore connecting his actions with the reinforcements (both positive and negative) that he receives in life. "Through this, expectancies are built up by the person about the contingencies between specific situations to situations that are more or less related; therefore generalized expectancies become established in the person's mind." (Roueche and Mink, 1976, p. 11) The internal's reinforcement history has provided him with success and a willingness to try. He has learned that an event or reinforcement is contingent upon his behavior or his own characteristics. Therefore he has more openness to new learning. With new learning he becomes more realistic. His expectancies and behavior will change as experience indicates is necessary. In Gestaltists' terms, this role of successful past experiences would involve the Trace Theory Function, the result of earlier processes. (Hilgard and Bower, 1975) The internal does not see his own behavior as controlling <u>every</u> event in his life, but realistically puts himself and his personal responsibility into his endeavors. He is inside rather than outside the formulation of much of his life's success.

An external "is a person who does not perceive the contingencies between his own behavior and outcomes" (Rouche and Mink, 1976, p. 10). Therefore, the external sees the cause of the reinforcement as luck, chance, powerful other persons, etc. He would not believe that he could control the reoccurence of reinforcement. Externality reduces the amount of learning that should occur due to new experiences (Rotter, et al, 1962).

From the foregoing discussion, it could be said that an internal would suffer less debilitating anxiety in regard to learning situations than would an external. Freud's Psychodynamics adds support to the locus of control concept and its concern with reinforcement in learning theory. Hilgard and Bower (1975) state that Freud's pleasure principle corresponds to contemporary learning theory's reinforcement or today's law of effect:

> The broad conception, common in both psychoanalysis and learning theory, is that a need state is a state of high tension. Whether we describe this in terms of instincts seeking gratification or of drives leading to consummatory responses, we are talking about similar events. What controls the direction of movement is a tendency to restore a kind of equilibrium, thus reducing tension." (Page 348)

In terms of one's locus of control orientation, this would relate to the fact that an internal would be better equipped to meet the demands of a high state of tension based on his previous positive reinforcements. He would realize that his own behavior and subsequent action are the tools by which to meet the source of tension head-on.

As stated earlier, an internal becomes more and more realistic with new learning, an experience he is more open to enter into than is an external. This, too, relates to Freud's Psychodynamics and his thoughts on the "reality principle". Hilgard and Bower (1975, pp. 348, 349) in their discussion of Freud's reality principle write

> As the young baby grows and matures, it finds that its biological needs are not automatically satisfied by a nurturing mother. The child is led into simple instructional acts in order to satisfy its needs; progressively, the motoric and perceptual skills develop which enable the child to deal with an increasingly demanding, uncompromising social and physical environment. Beginning as a primitive savage, the child matures and learns to adjust to the realities around him....Freud supposed that a part of the mind he called the ego contained all the skills of social and physical adjustment learned by the child -- strategies of postponing small immediate gratifications in order to gain larger delayed rewards, coping strategies of planning,

> reasoning, making rational decisions, and so on. As Freud would say, any behavior instrumental in adjusting the person to reality is done in the service of the "reality principle".

Freud believed that an individual would resort to unrealistic defenses when anxiety could not be reduced effectively by realistic methods. These unrealistic defenses were thought of by Freud as "instrumental behavior designed to avoid anxiety created by the conflict between an impulse seeking expression and the restraining forces of the environment and the superego. One of the most elementary defenses against anxiety is simply to consciously deny the cause of its existence; this happens particularly when the person cannot easily escape the threat by any other means. Especially for children whose reality-testing skills have not yet developed, denial may be a favored method for cancelling out unpleasant events." (Hilgard and Bower (1975, p. 350) This aspect of Freudian Psychodynamics definitely could be applicable to the externally-oriented person. Rather than accept the reality of the situation -- much less assume much responsibility for it -- the external very likely would resort to denial or other ego defense mechanisms such as repression, in which the external's "defense against anxiety associated with a thought or idea would be to repress it from conscious consideration" (Hilgard and Bower, 1975, p. 350). Still another popularly used defense mechanism used by externals is projection, described by Hilgard and Bower (1975, p. 350) in their discussion of Freud's thoughts related to learning theory, as, "the blocking of the person's own unacceptable impulses and the attribution of the source of the resulting anxiety to another person." For example, as Roueche and Mink (1976, p. 12) indicate, "A student who has an external locus of control does not see, or is not willing to see, the relationship between his studying and the grade he receives on the final -- he refuses to take responsibility for his grade -- the teacher gave him a C." Projection!

The importance of an understanding of the locus of control concept and

and how it may be in operation at Central Florida Community College is evident. CFCC, as most such colleges in the country, enrolls ever-increasing numbers of students in its two degree programs. Many of these students are classified as nontraditional, high-risk students who probably would not have attempted college prior to the advent of the community junior college for such reasons as being from the lower socioeconomic groups, family income, motivational barriers, and competitive admissions policies. (Roueche and Pitman, 1972) Over the years these high-risk students, once admitted to CFCC as elsewhere, have not persisted long. Often such students have different cultural backgrounds which have "failed to provide them with experiences typical of the youth that colleges are accustomed to teaching." (Roueche and Pitman, 1972, p. 7) Many have experienced considerable failure and have little if any positive self-regard and faith in themselves insofar as college work is concerned. (Roueche and Kirk, 1973) CFCC has experienced similar figures to a 1971 study by Medsker and Tillery quoted in Roueche and Pitman (1972, p. 12) that "only one-third of those starting transfer programs in the two-year colleges actually transferred."

Also, more and more minority students of differing cultural backgrounds and educational attitudes are entering CFCC (Weaver, 1976). During Term II, 1975-76, the college employed a Minority Recruiter as a follow-up to its Equal Access-Equal Opportunity studies. (Weaver, 1976). "Andrew Goodrich, Minority Research Director of the American Association of Junior Colleges, reports that the nationwide return rate of minority students to community colleges after one year is only one in nine" (Rouche and Kirk, 1973, p. 30). Christner (1975, p. 4) found in a review of 14 research studies, that retardates, Chicanos, the handicapped, and Blacks are more externally-oriented than middle class whites. She concluded, "This is in line with the (locus of control) theory which would state this is due to their reinforcement histories. (Generally, these groups have been manipulated more and have had less opportunities to

develop more internal orientations."

As stated in the Introduction to this report, lack of "motivation" is often heard at CFCC as the cause of high attrition rates, poor student performance and attendance, and any number of other complaints.

Through research, Rouche and Mink (1976) among many others, have proved that one's locus of control orientation plays a great part in one's degree of success or failure in academic performance and persistence. In their introduction to Improving Student Motivation, they say (page 1),

> America was founded on the principles of autonomy and self-determination. Odd as it may seem the complexity and depersonalization of modern America has eroded individual autonomy and self-confidence more than most of our other founding principles....Our experience, practice and research in community colleges across the country have indicated time and again the power of the ideas presented...the development of a self-concept characterized by internal locus of control facilitates identity and indeed, success.

In a 1974-75 Term I study of problem areas identified by 306 incoming CFCC freshman students surveyed by use of the Mooney Problem Check List, "Adjustment to College Work" was expressed as the greatest area of concern of these students. Eighty-five percent of the 149 males and 82 percent of the 157 females expressed such concern. (Weaver, 1974)

Roueche and Mink (1976, p. 1) tell us,

> Community junior colleges now enroll a large percentage of "high-risk" students whose educational histories are nontraditional. Many of these students have a history of failures and/or no or little sense of control and self-direction in their lives. The challenge faced by community college instructors and counselors is to aid these students in the realization of control in their lives and in the expectation of succeeding rather than failing. Helping to develop an internal locus of control orientation in students constitutes one key to facilitating student success.

One of a number of recommendations made in a recent Nova University Curriculum Development Module practicum dealing with CFCC's nontraditional, high-risk students was to utilize college Staff and Professional Development

funds for an on-campus workshop on "How to Motivate Students", hopefully, to be led by Dr. John E. Roueche, Professor at the University of Texas, and a Nova University national lecturer in Curriculum Development. (Weaver, 1976)

It was felt at the time of this recommendation attrition rates, poor performance, etc., could be dealt with by college personnel more effectively and realistically if they were updated on recent trends and instructed in how to deal with this type of student. This current Learning Theory study intensified the need to discover more about the locus of control orientation of both CFCC personnel and student samples to provide information from which the recommended workshop on "How to Motivate Students" could profit.

PROCEDURES

The ANS-IE Opinion Survey used as the basis for the data of this study was distributed to prospective participants in each of the seven groups surveyed as follows:

CFCC PROFESSIONAL PERSONNEL

1. Administrators. This group included the President, the Dean of Student Affairs, the Dean of Academic Affairs, the Dean of Administrative Services, the Director of Research and Development, and the Director of Admissions and Records. All were asked to participate on a voluntary, anonymous basis, with the exception that the opinion surveys were marked "Administration" for recognition purposes.

2. Division Directors. This group included the directors of each of the four academic divisions of the college: Natural Sciences, Business and Social Sciences, Applied Sciences, and Fine Arts. All were asked to participate on a voluntary, anonymous basis, with the exception that the opinion surveys were marked "Division Directors" for recognition purposes.

3. Counselors. This group included each of the five professionally-trained counselors on the CFCC faculty. All were asked to participate on a voluntary, anonymous basis, with the exception that the opinion surveys were marked "Counselors" for recognition purposes.

4. Teaching Faculty. This group included faculty members from each of the four academic divisions of the college as well as from the college's Basic Education Department, which teaches non-traditional, high-risk students. Names of at least four faculty members in each division were randomly selected by drawing. All were asked to participate on a voluntary, anonymous basis, with the exception that the opinion surveys were marked with the name of the

appropriate academic division for recognition purposes.

STUDENTS

1. May Graduates. A request for volunteer participants was made at a meeting of prospective May, 1976, graduates, at which 95 prospective graduates were in attendance. Copies of the ANS-IE Opinion Survey were distributed to each of the students. Time did not allow them to complete the survey during the meeting. Those who participated did so on their own time and returned the form to the Counseling Offices.

2. Students who withdrew from CFCC. The names of the 95 students who withdrew from CFCC during Term II, 1975-76, were obtained from the CFCC Records Office. A request for participation was mailed to each of these 95 former students together with a copy of the opinion survey and a stamped, addressed return envelope. All were asked to participate on a voluntary, anonymous basis and to provide information as to their sex, age, and race. Each survey form was color coded for recognition purposes.

3. Students who dropped two or more courses. The names of 128 students who had dropped two or more courses during Term II, 1975-56, were obtained from the CFCC Records Office. A request for participation was mailed to each of these 128 students together with a copy of the opinion survey and a stamped, addressed return envelope. All were asked to participate on a voluntary, anonymous basis and to provide information as to their sex, age, and race. Each survey form was color coded for recognition purposes.

4. Basic Education Department students. Students in Basic Education Department courses are marginal, non-traditional, high-risk students who are assigned to classes in the department on the basis of an evaluation of high school performance, background, and standardized test scores such as the Florida Twelfth Grade Placement Test. Forty of these students were enrolled in the two sections of Basic English (ENG 101) offered Term III-A, 1975-76. Most of the forty were enrolled in other courses within the Basic Education Department. As

an in-class ENG 101 assignment, all of the 40 students completed the ANS-IE Opinion Survey and provided information as to their sex, age, and race.

The data derived from the study was used to compare the Internal-External Locus of Control orientation of the eight groups. Although not to be tested by statistical analysis other than comparisons of means and percentages, the basic hypothesis of the study was that CFCC administrators, division directors, counselors, teaching faculty, and graduates would have high internal locus of control orientations and that students who are high-risk or who withdrew from the college or dropped two or more courses would have high external locus of control orientations. Thus, the comparative study sought to answer the following questions:

Is there a difference between the internal locus of control means of CFCC professional personnel and --

1. -- CFCC graduates.
2. -- CFCC students who withdrew from the college.
3. -- CFCC students who dropped two or more courses.
4. -- new CFCC non-traditional, high-risk students.
5. -- CFCC student samples by age groups -- 17-20, 21-30, and 31 and over.
6. -- CFCC student samples by race.
7. -- CFCC student samples by sex.
8. -- the various CFCC professional personnel sub-samples of which it is composed.

Limitations of the Study

1. The entire study was to be based on data derived from responses to the ANS-IE opinion survey. With only two exceptions (Basic Education students and May graduates), no direct, person-to-person appeals for participation were possible. Rather, the requests for anonymous, voluntary participation were mailed to the prospective participants. (See Appendix B.) With such little to motivate them, prospective participants easily could disregard the appeal.

2. Mailed-out questionnaires were used since a better method was not available, but such an approach had dubious merit due to the likelihood of poor response as well as the researcher's inability to check the responses. A response of 50-60% would be considered a reasonably poor response and one open to question. For more valid interpretation of responses, the mailed-out questionnaire return would have to be 80-90%, otherwise valid generalizations could not be made. With less than 80-90% response, the researcher should have attempted to learn something about the characteristics of the non-respondents. This would not be possible. (Kerlinger, 1966)

3. It was impossible to determine the race of the students who were being asked to participate in the study. Consequently, it would be impossible to determine if the percentages of blacks and whites responding was in proportion to the total of such students who were asked to participate.

4. It was impossible to determine the age of any of the students who were asked to participate in the study; although it was known that the larger percentage of the college enrollment was in the 17-20 age group.

5. The total teaching faculty members from which to randomly select a sample was limited inasmuch as the study was undertaken during CFCC's Term III-A, a summer term, in which only approximately 50 percent of the faculty teaches.

6. Questions on the ANS-IE opinion survey which was used as the basis of the study could be interpreted differently or misinterpreted entirely by respondents, even though the instrument has been proved a valid and reliable one.

7. Time would be a factor in accumulating the data. If relatively few persons responded prior to the date on which it would be necessary to process and analyze the data, the study's results would have less meaning.

8. A possible limitation regarding the responses of those students who had withdrawn from CFCC or who had dropped two or more courses was that those who would take the time to respond and mail back the survey form perhaps might be more internal in their locus of control orientation. Those not replying possibly could be more external. The study, therefore, might be distorted.

Basic Assumptions

1. The primary basic assumption of this study was that the Locus of Control concept developed from Rotter's Social Learning Theory construct was valid. Roueche and Mink (1976, p. 10) cite, "An extremely large volume of research has been produced verifying the validity of Rotter's construct."

2. It was assumed that the Nowicki-Strickland Internal-External Scale (ANS-IE) would be the appropriate instrument to use in the comparative study. "This scale is derived from Rotter's theory and has been shown very acceptable psychometric characteristics." (Roueche and Mink, 1976, pp. 18-19.)

3. It was assumed that the ANS-IE instrument would be readily understood and answered. It "consists of 40 items (at a fifth grade reading level) answered either yes or no....(it) takes about 15 or minutes for the student to take. The students are told that it is an opinion survey (which it is). The directions are self-explanatory." (Roueche and Mink, 1976, p. 19)

4. The ANS-IE is appropriate for a comparative study between groups. "...this test is group-referenced....for discovering trends within a particular group." (Roueche and Mink, 1976, p. 19)

5. Recommendations to the college can be made based on the results of the ANS-IE. For example, instructors can be taught the concept of locus of control and how to interpret the results of a group and of individuals within the

group. One's attention can "focus on the more external student and remediating his weaknesses though the median of a series of success experiences and techniques..." (Roueche and Mink, 1976, p. 20)

6. The assumption was made that CFCC professional personnel, by virtue of their previous academic and professional success, would show high internality; and that student samples would show less internality. To serve better these more external students, a comparative study could demonstrate this difference in this locus of control personality variable. From this information, recommendations could be made.

7. It was assumed that CFCC graduates, having made it successfully through the system, would show high internality -- comparable to that of CFCC professional personnel. As internals,they would "see that their studying for the final would directly affect their grade. They have an expectancy of control... They have an expectancy of success, since they have learned to connect or see the contingencies between their behavior and the reinforcements they receive." (Roueche and Mink, 1976, p.12)

8. It was assumed that CFCC students who withdrew from the college or who dropped two or more courses would be more external than CFCC personnel and CFCC graduates. They didn't "survive", possibly due to an external locus of control in which they do not believe they can control the pay-offs in their lives through their own behavior. "If a person does not see the contingencies between his own behavior and reinforcements, he will learn less, exert less control over his environment and therefore his own life. A person who has an external locus of control does not see, or is not willing to see, the relationship between his studying and the grade he receives on the final -- he refuses to take responsibility for his grade ..." (Roueche and Mink, 1976, p.12)

9. It was assumed that the CFCC Basic Education Department's non-traditional, high-risk students would show much less internality than CFCC personnel or graduates. "Community and junior colleges now enroll a large

percentage of 'high-risk' students whose educational histories are nontraditional. Many of these students have a history of failure and/or no or little sense of control and self-direction in their lives." (Roueche and Mink, 1976, p. 1)

10. It was assumed that minority students would show less internality than CFCC personnel and graduates. "Characterized by feelings of powerlessness, worthlessness, alienation and inappropriate adaptive behaviors -- delinquency, hostility, unrealistic levels of aspiration, lack of problem-solving skill and experience -- persons from all ethnic groups in the lower social strata find themselves among the ranks of the physically and mentally handicapped." (Roueche and Mink, 1976, p. 25)

11. It was assumed that all student groups aged 17-20 would show less internality than CFCC personnel, graduates, and older students.

12. It was assumed that possibly female students would show less internality than male students, due to traditional stereotypical values and attitudes they may have internalized during their maturation process.

13. It was assumed that all CFCC personnel sub-samples would show high internality -- with very little difference in means or range of scores.

14. It was assumed that most CFCC personnel would voluntarily participate in the study by completing and returning the ANS-IE opinion survey.

15. It was assumed that a reasonable percentage of students who had withdrawn from CFCC or who had dropped two or more courses would be returned despite the indirect, mailed-out appeal for their participation.

16. It was assumed that a reasonable percentage of prospective May graduates would respond to the appeal for participation made directly to them at their meeting of prospective graduates.

17. It was assumed that the Basic Education ENG 101 instructor would follow through on his agreement to provide the Basic Education non-traditional, high-risk student sample's responses.

RESULTS

Table 1 below shows the percentages of responses to the ANS-IE participation appeal received from the various CFCC professional personnel groups.

TABLE 1

ANS-IE DISTRIBUTION, RESPONSE, AND PERCENTAGE OF RESPONSE INFORMATION OF CFCC PROFESSIONAL PERSONNEL

Group	Distributed	Responses	Percentage of Return
Administrators	6	5	83%
Division Directors	4	4	100%
Counselors	5	5	100%
Teaching Faculty	24	23	96%
--Business & Social Sciences	5	5	100%
--Natural Sciences	5	4	80%
--Applied Sciences	5	5	100%
--Basic Education	4	4	100%
--Fine Arts	5	5	100%
ALL CFCC PROFESSIONAL PERSONNEL	39	37	95%

Table 2 on the next page of this report shows the percentages of responses to the ANS-IE participation appeal received from the various CFCC student groups surveyed.

TABLE 2

ANS-IE DISTRIBUTION, RESPONSE, AND PERCENTAGE OF RESPONSE INFORMATION OF FOUR STUDENT GROUPS SURVEYED

Group	Distributed	Responses	Percentage of Return
May Graduates	95	25	26%
Term II Withdrawals	95	38	40%
Term II - Dropping 2 or more Courses	128	56	44%
New Basic Education, High-Risk Students	40	40	100%

Table 3 below shows the age group distribution of the 159 respondents from the four student samples.

TABLE 3

STUDENT SAMPLES' RESPONDENTS BY AGE GROUP

SAMPLE:	17-20	% of Total	21-30	% of Total	31 & Over	% of Total	Total
May Graduates	16	64%	8	32%	1	4%	25
Withdrawals	18	47%	14	37%	6	16%	38
Dropping 2 or More Courses	37	66%	16	29%	3	5%	56
Basic Education Students	15	37.5%	17	42.5%	8	20%	40

Table 4 on the next page of this report shows the sex distribution of the 159 respondents from the four student groups.

TABLE 4

STUDENT SAMPLES' RESPONDENTS
BY SEX DISTRIBUTION
AND AGE GROUP

Group	17-20 Male	17-20 Female	21-30 Male	21-30 Female	31 & Over Male	31 & Over Female	TOTALS: Male	TOTALS: Female	TOTALS: Not Given	TOTALS: All
Graduates	9	7	4	4	0	1	13	12	0	25
Withdrawals	6	12	6	8	5	1	17	21	0	38
Dropping 2 or More Courses	18	17	12	6	2	1	32	24	0	56
Basic Education Students	8	7	12	4	8	0	28	11	1	40

Table 5 below shows the distribution by race of the 159 respondents from the four student groups surveyed.

TABLE 5

STUDENT SAMPLES' RESPONDENTS
BY RACE AND AGE GROUP

Group	17-20 White	17-20 Black	21-30 White	21-30 Black	31 & Over White	31 & Over Black	TOTALS: White	TOTALS: Black	TOTALS: Other
Graduates	15	1	8	0	0	1	23	2	0
Withdrawals	17	1	8	6	6	0	31	7	0
Dropping 2 or More Courses	27	8	10	8	2	1	39	17	0
Basic Education Students	5	7	11	6	8	0	24	13	3

All CFCC Personnel Data Results

Appendix C presents all calculation figures of internal and external locus of control response means, corresponding percentages of internality and externality, and the plus-or-minus differences from the All CFCC Personnel means for each CFCC personnel sub-sample.

The internal locus of control mean for All CFCC Personnel was calculated as 33. (The total possible internal or external responses was 40, the total number of ANS-IE items.) This All CFCC Personnel Internal response mean of 33 out of 40 represented 82.5% internality. The external response mean of 7 represented 17.5% externality expressed by the All CFCC Personnel sample.

Figure 1 on the next page of this report graphically presents the All CFCC Personnel internal response mean of 33 compared with the internal response means of each of the sub-samples of which the All CFCC Personnel mean is comprised. These sub-samples' internal response means and their corresponding percentages of internality and externality are presented below in Table 6.

TABLE 6

INTERNAL AND EXTERNAL LOCUS OF CONTROL MEANS AND THE CORRESPONDING PERCENTAGES OF INTERNALITY-EXTERNALITY OF CFCC PERSONNEL SUB-SAMPLES

Group	Internal Response Mean	Corresponding Percentage of Internality	External Response Mean	Corresponding Percentage of Externality
Administrators	34	85%	6	15%
Division Directors	31	77.5%	9	22.5%
Counselors	35	87.5%	5	12.5%
All Teaching Faculty	33	82.5%	7	17.5%
--Business & Soc. Sci.	35	87.5%	5	12.5%
--Natural Sciences	34	85%	6	15%
--Applied Sciences	33	82.5%	7	17.5%
--Basic Education	33	82.5%	7	17.5%
-- Fine Arts	28	70%	12	30%

A COMPARISON OF THE INTERNAL LOCUS OF CONTROL MEANS
OF THE CFCC PERSONNEL SUB-SAMPLES
WITH THE ALL-CFCC PERSONNEL MEAN

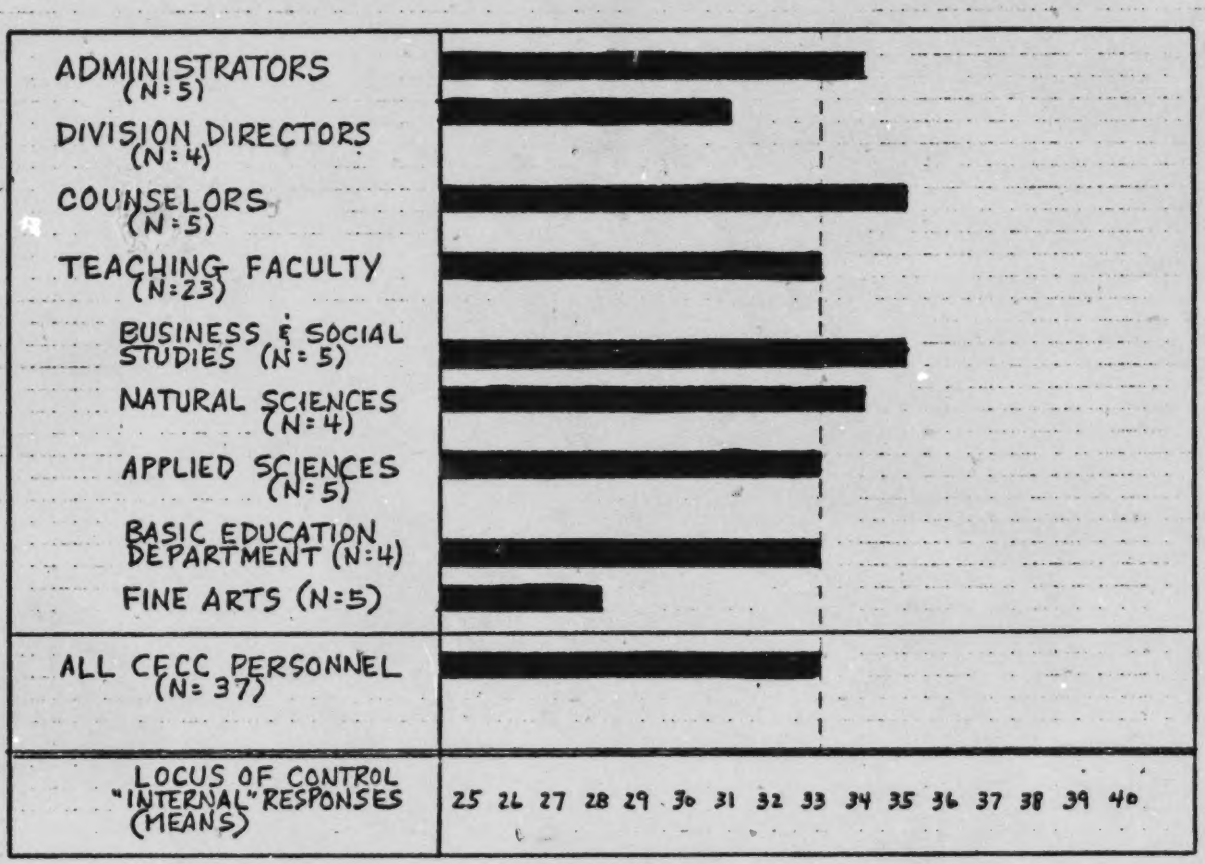

ADMINISTRATORS (N=5)
DIVISION DIRECTORS (N=4)
COUNSELORS (N=5)
TEACHING FACULTY (N=23)
BUSINESS & SOCIAL STUDIES (N=5)
NATURAL SCIENCES (N=4)
APPLIED SCIENCES (N=5)
BASIC EDUCATION DEPARTMENT (N=4)
FINE ARTS (N=5)
ALL CFCC PERSONNEL (N=37)
LOCUS OF CONTROL "INTERNAL" RESPONSES (MEANS)
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Figure 1

Table 7 below shows the ranges, medians, and means of the internal locus of control responses for the CFCC professional personnel surveyed:

TABLE 7

INTERNAL LOCUS OF CONTROL RESPONSES:
Range of Scores, Medians, and Means
of CFCC Personnel Sub-Samples

Group	N	Range	Median	Mean
Administrators	5	31-38	33	34
Division Directors	4	21-38	32	31
Counselors	5	30-38	38	35
All Teaching Faculty	23	21-38	33	33
--Business & Social Sciences	5	31-38	35	35
--Natural Sciences	4	30-37	34	34
--Applied Sciences	5	29-37	33	33
--Basic Education	4	31-37	32.5	33
--Fine Arts	5	21-37	27	28
ALL CFCC PERSONNEL	37	21-38	33	33

Figure 2 on the next page of this report graphically compares the range of internal locus of control responses of all CFCC personnel sub-samples as well as all student sub-samples by age group, race, and sex. For further comparison, Figure 3 on the following page graphically compares the ranges of external locus of control responses of all CFCC personnel sub-samples as well as all student sub-samples by age group, race, and sex. It was noticed that generally, the internal responses range was considerably smaller for the CFCC personnel sub-samples than were the ranges for the student sub-samples.

A COMPARISON OF THE RANGES OF INTERNAL LOCUS OF CONTROL SCORES
OF ALL SUB-SAMPLES
WITH THE ALL-CFCC PERSONNEL RANGE OF SCORES

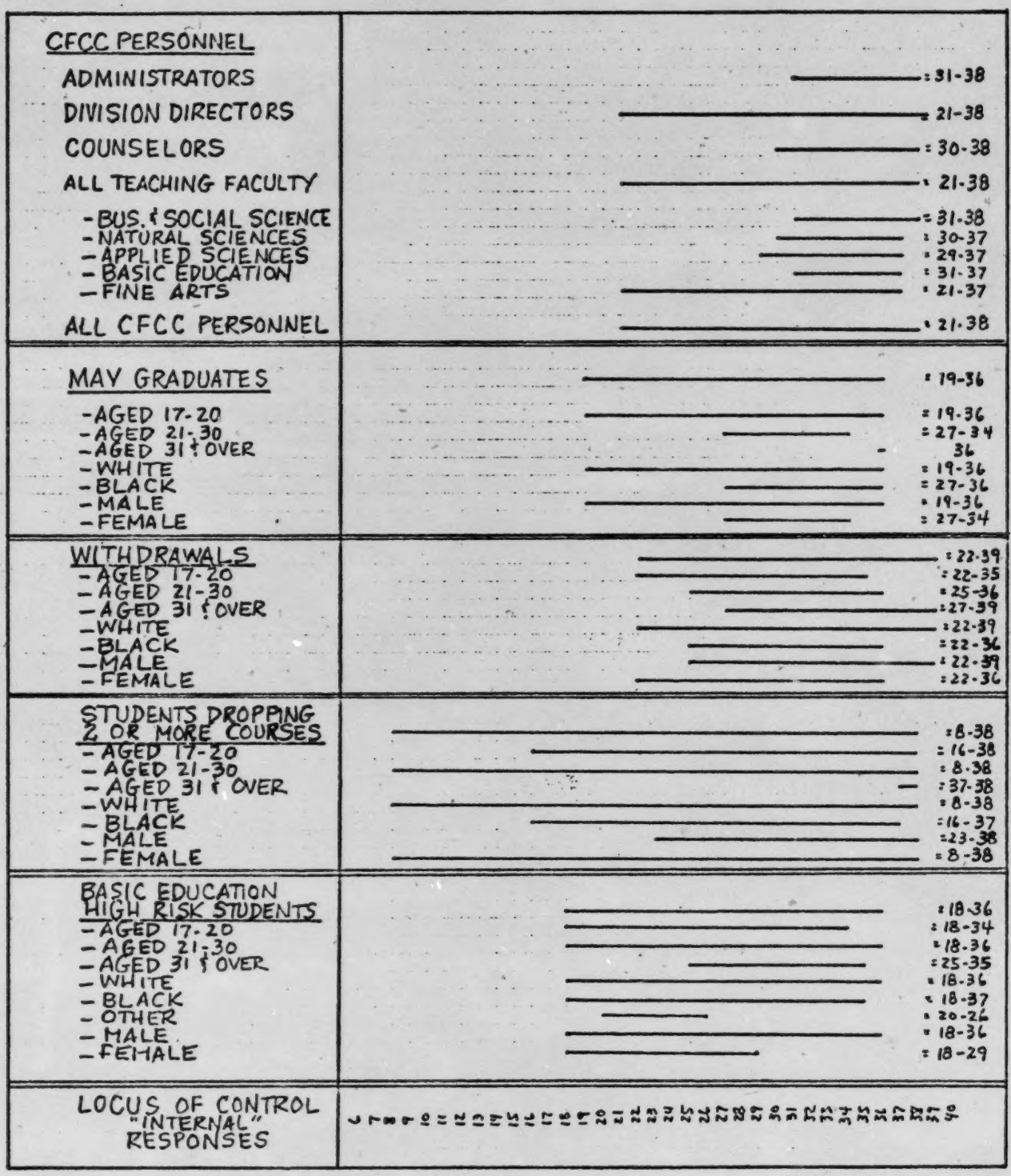


Figure 2

A COMPARISON OF THE RANGES OF EXTERNAL LOCUS OF CONTROL SCORES OF ALL SUB-SAMPLES WITH THE ALL-CFCC PERSONNEL RANGE OF SCORES

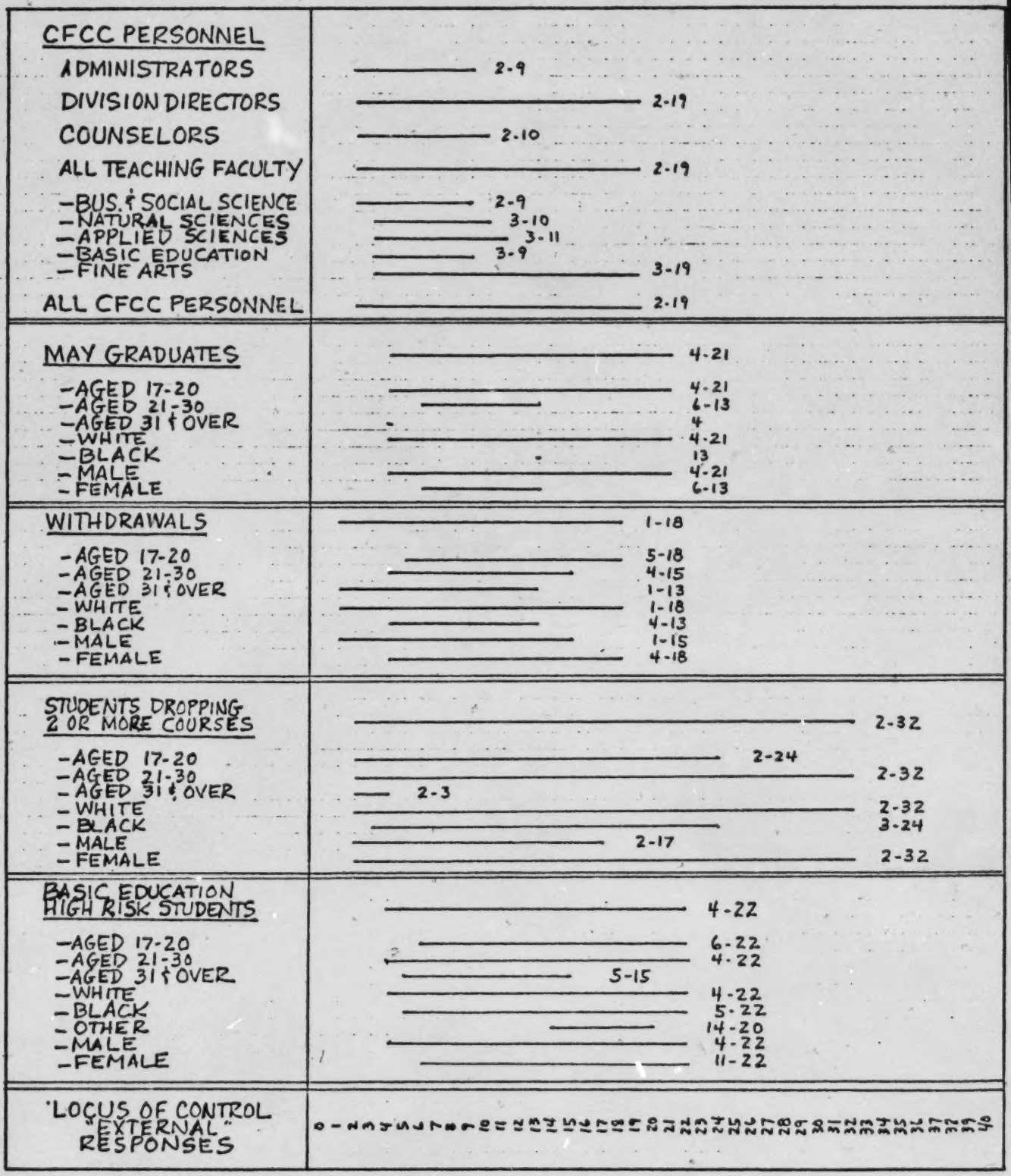


Figure 3

Table 8 below shows the plus-or-minus differences from the All CFCC Personnel internal locus of control mean (33) for each of the CFCC personnel sub-sample means.

TABLE 8

DIFFERENCES FROM THE ALL CFCC PERSONNEL INTERNAL LOCUS OF CONTROL MEAN (33) OF EACH OF THE CFCC PERSONNEL SUB-SAMPLES' INTERNAL LOCUS OF CONTROL MEANS

Group	N	Mean	Difference from the All CFCC Personnel Internal Mean (33)
Administrators	5	34	+ 1
Division Directors	4	31	- 2
Counselors	5	35	+ 2
All Teaching Faculty	23	33	0
--Business & Social Sciences	5	35	+ 2
--Natural Sciences	4	34	+ 1
--Applied Sciences	5	33	0
--Basic Education	4	33	0
--Fine Arts	5	28	- 5

Figure 4 on the next page of this report graphically presents the plus-or-minus differences from the All CFCC Personnel internal locus of control mean (33) for all of the CFCC personnel sub-samples as well as for student samples by total, aged 17-20, and race, aged 17-20, It was noted that generally the differences from the All CFCC internal locus of control mean was slighter for CFCC personnel sub-samples than it was for the student samples.

INTERNAL LOCUS OF CONTROL:
A Comparison of the Differences of the Means
Of 9 CFCC Personnel Sub-samples
and 16 Student Sub-samples
From the Total CFCC Personnel Mean ($\bar{X}$=33)

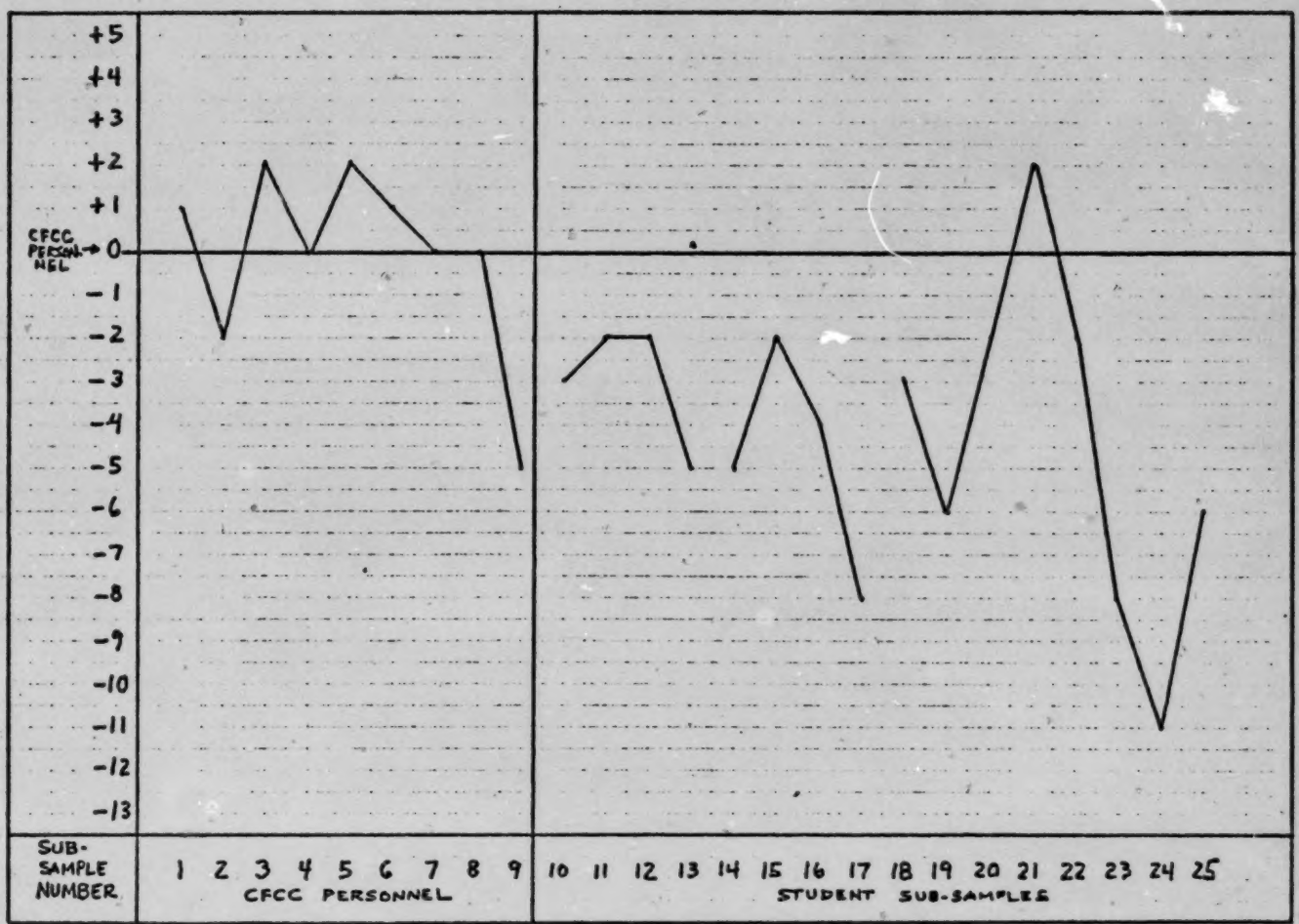


Figure 4

SUB-SAMPLES

1. Administrators
2. Division Directors
3. Counselors
4. All Teaching Faculty
5. Business & Social Science Faculty
6. Natural Sciences Faculty
7. Applied Sciences Faculty
8. Basic Education Faculty
9. Fine Arts Faculty
10. May Graduates - Total Sample
11. Withdrawals - Total Sample
12. Students Dropping 2 or More Courses - Total Sample
13. Basic Education Students - Total
14. May Graduates - Aged 17-20
15. Withdrawals - Aged 17-20
16. Students Dropping 2 or More Courses - Aged 17-20
17. Basic Education Students - 17-20
18. May Graduates, White, 17-20
19. May Graduates, Black, 17-20
20. Withdrawals, White, 17-20
21. Withdrawals, Black, 17-20
22. Dropping 2 or More, White, 17-20
23. Dropping 2 or More, Black, 17-20
24. Basic Educ. Students, White, 17-20
25. Basic Educ. Students, Black, 17-20

For further comparison, Table 9 below shows the plus-or-minus differences from the All CFCC Personnel external locus of control mean (7) for each of the CFCC personnel sub-samples.

TABLE 9

DIFFERENCES FROM THE ALL CFCC PERSONNEL EXTERNAL LOCUS OF CONTROL MEAN (7) OF EACH OF THE CFCC PERSONNEL SUB-SAMPLES' EXTERNAL LOCUS OF CONTROL MEANS

Group	N	Mean	Difference from the All CFCC Personnel External Mean (7)
Administrators	5	6	- 1
Division Directors	4	9	+ 2
Counselors	5	5	- 2
All Teaching Faculty	23	7	0
--Business & Social Sciences	5	5	- 2
--Natural Sciences	4	6	- 1
--Applied Sciences	5	7	0
--Basic Education	4	7	0
--Fine Arts	5	12	+ 5

Figure 5 on the next page of this report graphically presents the plus-or-minus differences from the All CFCC Personnel external locus of control mean (7) for all CFCC personnel sub-samples as well as for student samples by total, aged17-20, and race, aged 17-20. It was noted that generally the differences from the All CFCC external locus of control mean was slighter for CFCC personnel sub-samples than it was for the student samples.

EXTERNAL LOCUS OF CONTROL:
A Comparison of the Differences of the Means
Of 9 CFCC Personnel Sub-samples
and 16 Student Sub-samples
From the Total CFCC Personnel Mean ($\bar{X}$=7)

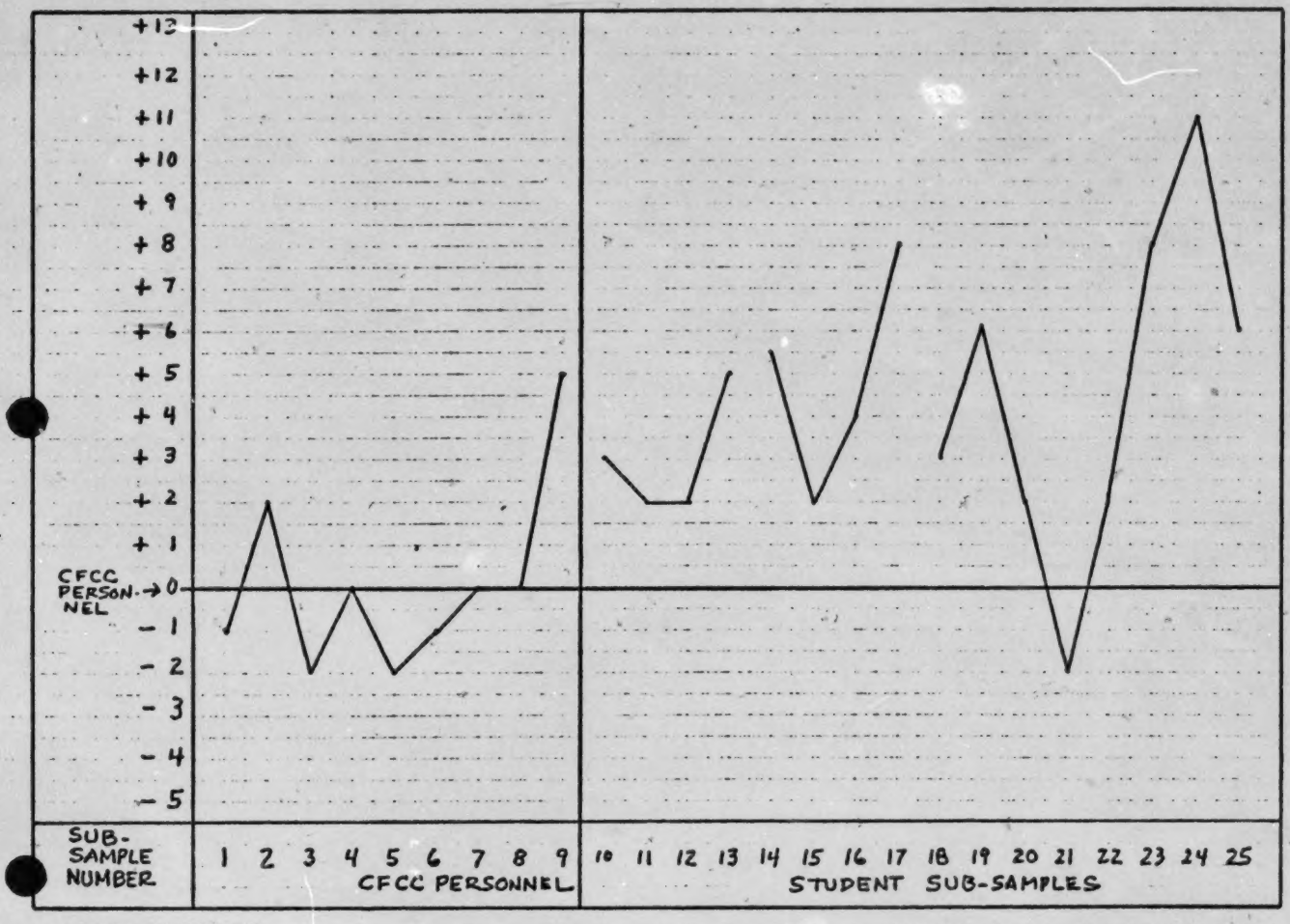


Figure 5

SUB-SAMPLES

1. Administrators
2. Division Directors
3. Counselors
4. All Teaching Faculty
5. Business & Social Science Faculty
6. Natural Sciences Faculty
7. Applied Sciences Faculty
8. Basic Education Faculty
9. Fine Arts Faculty
10. May Graduates - Total Sample
11. Withdrawals - Total Sample
12. Students Dropping 2 or More Courses - Total Sample
13. Basic Education Students - Total
14. May Graduates - Aged 17-20
15. Withdrawals - Aged 17-20
16. Students Dropping 2 or More Courses - Aged 17-20
17. Basic Education Students - 17-20
18. May Graduates, White, 17-20
19. May Graduates, Black, 17-20
20. Withdrawals, White, 17-20
21. Withdrawals, Black, 17-20
22. Dropping 2 or More, White, 17-20
23. Dropping 2 or More, Black, 17-20
24. Basic Educ. Students, White, 17-20
25. Basic Educ. Students, Black, 17-20

May Graduate Data Results

Appendix D presents all calculation figures of internal and external locus of control response means, corresponding percentages of internality and externality, and the plus-or-minus differences from the All CFCC Personnel means for each May graduate sub-sample.

As noted in Table 2, page 18, the percentage of responses received from May graduates was 26 percent, far less than the 80-90% considered necessary in order to be able to make any valid generalizations from the data. With this in mind, calculations were prepared nevertheless.

The internal locus of control mean for the May graduate sample was calculated as 30, three less than the All CFCC Personnel internal response mean of 33. This mean of 30 out of 40 responses represented 75% internality compared to 82.5% internality for the All CFCC Personnel sample. The external response mean of 10 for May graduates is three more than the All CFCC Personnel response mean of 7 and represents 25% externality as compared to 17.5% externality expressed by the All CFCC Personnel sample.

Table 10 on the following page of this report summarizes data on May graduates' internality and externality by sub-samples.

Figure 6, which follows Table 10, graphically presents the internal locus of control response means of May graduates and all May graduate sub-samples as compared to the internal locus of control response mean of the All CFCC Personnel sample.

TABLE 10

MAY GRADUATES' INTERNAL AND EXTERNAL
LOCUS OF CONTROL RESPONSE DATA
BY SELECTED SUB-SAMPLES

Sub-Sample	N	Internal Mean	% of Internality	Difference CFCC Personnel Internal Mean (33)	External Mean	% of Externality	Difference from CFCC Personnel External Mean (7)
Aged 17-20	16	28	70%	- 5	12	30%	+ 5
21-30	8	32	80%	- 1	8	20%	+ 1
31 & Over	1	36	90%	+ 3	4	10%	- 3
White, Aged 17-20	15	30	75%	- 3	10	25%	+ 3
White, Aged 20-30	8	32	80%	- 1	8	20%	+ 1
White, Aged 31 & Over	--	--	---	-	--	---	-
White, All Ages	23	31	77.5%	- 2	9	22.5%	+ 2
Black, Aged 17-20	1	27	67.5%	- 6	13	32.5%	+ 6
Black, Aged 21-30	0	--	---	-	--	---	-
Black, Aged 31 & Over	1	36	90%	+ 3	4	10%	- 3
Black, All Ages	2	32	80%	- 1	8	20%	+ 1
Male, Aged 17-20	9	27	67.5%	- 6	13	32.5%	+ 6
Male, Aged 21-30	4	33	82.5%	0	7	17.5%	0
Male, Aged 31 & Over	0	--	---	-	--	---	-
Male, All Ages	13	29	72.5%	- 4	11	27.5%	+ 4
Female, Aged 17-20	7	30	75%	- 3	10	25%	+ 3
Female, Aged 21-30	4	31	77.5%	- 2	9	22.5%	+ 2
Female, Aged 31 & Over	1	36	90%	+ 3	4	10%	- 3
Female, All Ages	12	31	77.5%	- 2	9	22.5%	+ 2

A COMPARISON OF THE INTERNAL LOCUS OF CONTROL MEANS
OF MAY GRADUATES
WITH THE ALL-CFCC PERSONNEL MEAN

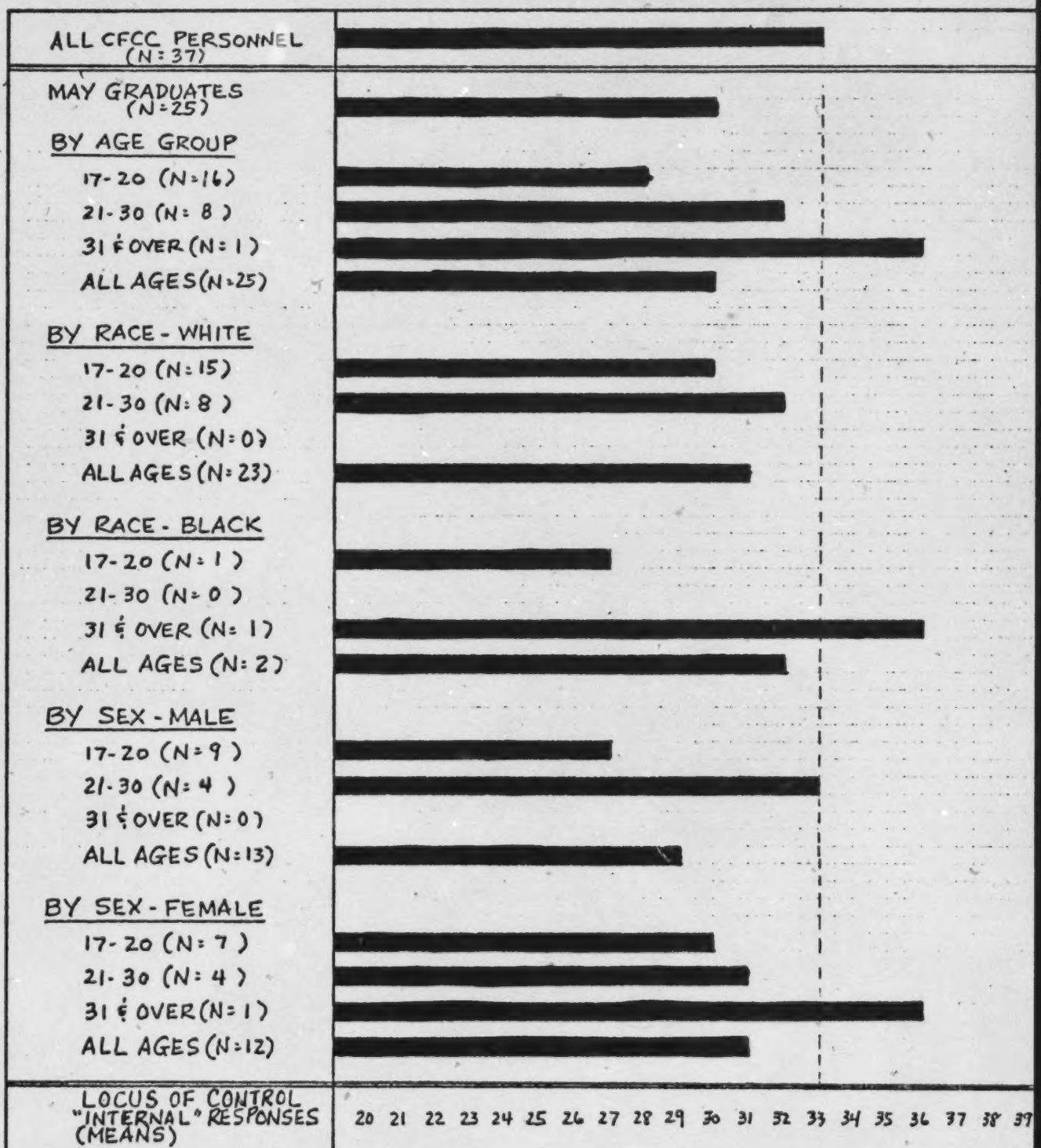


Figure 6

Table 11 below shows the ranges, medians, and means of the internal locus of control responses for the sample of May graduates and selected sub-samples by age (17-20) and by race (aged 17-20).

TABLE 11

MAY GRADUATE INTERNAL LOCUS OF CONTROL RESPONSE RANGES, MEDIANS, AND MEANS BY TOTAL SAMPLE AND TWO SELECTED SUB-SAMPLES (By Age (17-20) and By Race (Aged 17-20)

Group	N	Range	Median	Mean
Total May Graduate Sample	25	19-36	31	30
Graduates, Aged 17-20	16	19-36	23	28
Graduates, White, 17-20	15	19-36	29	30
Graduates, Black, 17-20	1	27	27	27

Figure 2 on page 23 of this report graphically compares the ranges of internal locus of control responses of May graduates' samples with CFCC professional personnel as well as the all student group sub-samples by age group, race, and sex.

For further comparison, Figure 3 on page 24 of this report graphically compares the ranges of external locus of control responses of the May graduates' samples with CFCC professional personnel as well as all student group sub-samples by age group, race, and sex.

Table 12 on the following page of this report shows the plus-or-minus differences from the All CFCC Personnel internal locus of control mean (33) for each of the May graduate sub-samples.

TABLE 12

DIFFERENCES FROM THE ALL CFCC PERSONNEL INTERNAL LOCUS OF CONTROL MEAN (33) OF EACH OF THE MAY GRADUATE SUB-SAMPLE INTERNAL MEANS

Group	N	Internal Mean	Difference from All CFCC Personnel Internal Mean (33)
Total May Graduate Sample	25	30	- 3
Aged 17-20	16	28	- 5
21-30	8	32	- 1
31 & Over	1	36	+ 3
White, Aged 17-20	15	30	- 3
Aged 21-30	8	32	- 1
Aged 31 & Over	0	--	-
All Ages	23	31	- 2
Black, Aged 17-20	1	27	- 6
Aged 21-30	0	--	-
Aged 31 & Over	1	36	+ 3
All Ages	2	32	- 1
Male, Aged 17-20	9	27	- 6
Aged 21-30	4	33	0
Aged 31 & Over	0	--	-
All Ages	13	29	- 4
Female, Aged 17-20	7	30	- 3
Aged 21-30	4	31	- 2
Aged 31 & Over	1	36	+ 3
All Ages	12	31	- 2

Figure 4 on page 26 of this report graphically presents the plus-or-minus differences from the All CFCC Personnel internal locus of control mean (33) for the May graduate sub-samples as well as the CFCC sub-samples and sub-samples of all other student groups.

For further comparison, Table 13 below shows the plus-or-minus differences from the All CFCC Personnel external locus of control response mean (7) for each of the May graduate sub-samples.

TABLE 13

DIFFERENCES FROM THE ALL CFCC PERSONNEL EXTERNAL LOCUS OF CONTROL MEAN (7) OF EACH OF THE MAY GRADUATE SUB-SAMPLE EXTERNAL MEANS

Group	N	External Mean	Difference from All CFCC Personnel External Mean (7)
Total May Graduate Sample	25	10	+ 3
Aged 17-20	16	12	+ 5
21-30	8	8	+ 1
31 & Over	1	4	- 3
White, Aged 17-20	15	10	+ 3
Aged 21-30	8	8	+ 1
Aged 31 & Over	0	--	-
All Ages	23	9	+ 2
Black, Aged 17-20	1	13	+ 6
Aged 21-30	0	--	-
Aged 31 & Over	1	4	- 3
All Ages	2	8	+ 1
Male, Aged 17-20	9	13	+ 6
Aged 21-30	4	7	0
Aged 31 & Over	0	--	-
All Ages	13	11	+ 4
Female, Aged 17-20	7	10	+ 3
Aged 21-30	4	9	+ 2
Aged 31 & Over	1	4	- 3
All Ages	12	9	+ 2

Figure 5 on page 28 of this report graphically presents this plus-or-minus difference from the All CFCC Personnel external locus of control mean (7) for the

May graduate sub-samples as well as the CFCC Personnel sub-samples and sub-samples of all other student groups.

Students Withdrawing From CFCC - Data Results

Appendix E presents all calculation figures of internal and external locus of control response means, corresponding percentages of internality and externality, and the plus-or-minus differences from the All CFCC Personnel means for each sub-sample of students who withdrew from CFCC Term II, 1975-76.

As noted in Table 2, page 18 of this report, the percentage of responses received from withdrawn students was 40%, considerably less than the 80-90% considered necessary in order to be able to make any valid generalizations from the data. With this in mind, calculations were prepared nevertheless.

The internal locus of control mean for the total sample of students withdrawing from CFCC was calculated as 31, two less than the All CFCC Personnel mean of 33. This mean of 31 out of 40 on internal responses represented 77.5% internality compared to 82.5% internality for the All CFCC Personnel sample. The external response mean of 9 for students withdrawing is two more than the All CFCC Personnel external response mean of 7 and represented 22.5% externality as compared to 17.5% externality expressed by All CFCC Personnel.

Table 14 on the following page of this report summarizes data on students withdrawing from CFCC's internality and externality by sub-samples.

Figure 7, which follows Table 14, graphically presents the internal locus of control response means of withdrawn students and all withdrawn student sub-samples as compared to the internal locus of control response mean of the All CFCC Personnel sample.

TABLE 14

WITHDRAWN STUDENTS' INTERNAL AND EXTERNAL
LOCUS OF CONTROL RESPONSE DATA
BY SELECTED SUB-SAMPLES

Sub-Sample	N	Internal Mean	% of Internality	Difference from CFCC Personnel Internal Mean (33)	External Mean	% of Externality	Difference from CFCC Personnel External Mean (7)
Aged 17-20	18	31	77.5%	- 2	9	22.5%	+ 2
21-30	14	31	77.5%	- 2	9	22.5%	+ 2
31 & Over	6	32	80%	- 1	8	20%	+ 1
White, Aged 17-20	17	31	77.5%	- 2	9	22.5%	+ 2
White, Aged 21-30	8	32	80%	- 1	8	20%	+ 1
White, Aged 31 & Over	6	32	80%	- 1	8	20%	+ 1
White, All Ages	21	32	80%	- 1	8	20%	+ 1
Black, Aged 17-20	1	35	87.5%	+ 2	5	12.5%	- 2
Black, Aged 21-30	6	30	75%	- 3	10	25%	+ 3
Black, Aged 31 & Over	0	--	---	-	--	---	-
Black, All Ages	7	31	77.5%	- 2	9	22.5%	+ 2
Male, Aged 17-20	6	31	77.5%	- 2	9	22.5%	+ 2
Male, Aged 21-30	6	31	77.5%	- 2	9	22.5%	+ 2
Male, Aged 31 & Over	5	33	82.5%	0	7	17.5%	0
Male, All Ages	17	32	80%	- 1	8	20%	+ 1
Female, Aged 17-20	12	31	77.5%	- 2	9	22.5%	+ 2
Female, Aged 21-30	8	32	80%	- 1	8	20%	+ 1
Female, Aged 31 & Over	1	28	70%	- 5	12	30%	+ 5
Female, All Ages	21	31	77.5%	- 2	9	22.5%	+ 2

A COMPARISON OF THE INTERNAL LOCUS OF CONTROL MEANS
OF STUDENTS WITHDRAWN FROM CFCC
WITH THE ALL-CFCC PERSONNEL MEAN

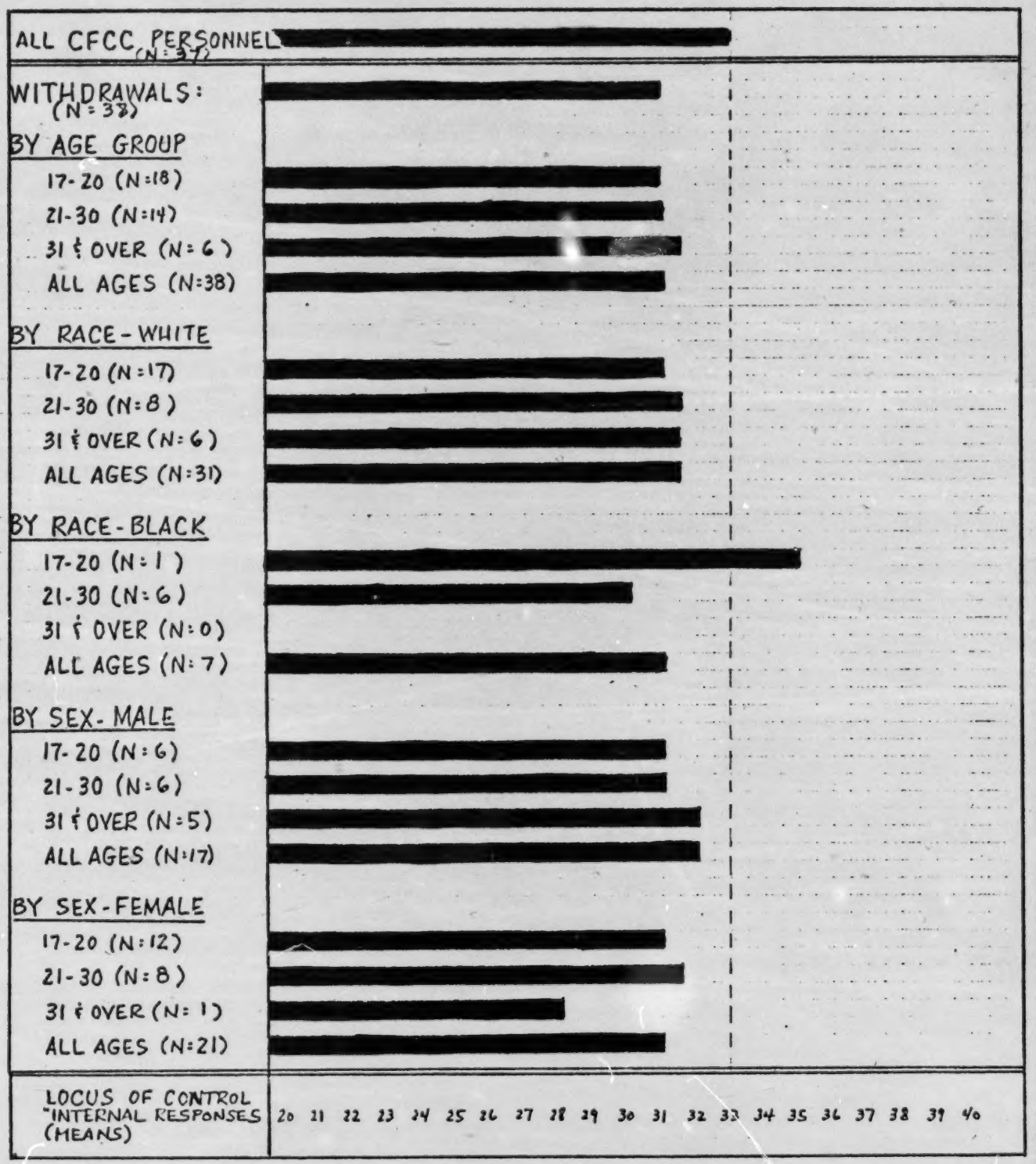


Figure 7

Table 15 below shows the ranges, medians, and means of the internal locus of control responses for the sample of students withdrawn from CFCC and selected sub-samples by age (17-20) and by race (aged 17-20).

TABLE 15

WITHDRAWN STUDENTS INTERNAL LOCUS OF CONTROL RESPONSE
RANGES, MEDIANS, AND MEANS
BY TOTAL SAMPLE AND TWO SELECTED SUB-SAMPLES
(By Age - 17-20 - and By Race (Aged 17-20)

Group	N	Range	Median	Mean
Total Withdrawn Students	37	22-39	32	31
Aged 17-20	18	22-35	32	31
White, Aged 17-20	17	22-35	32	31
Black, Aged 17-20	1	35	35	35

Figure 2 on page 23 of this report graphically compares the ranges of internal locus of control responses of withdrawn students' samples with CFCC professional personnel as well as the all student group sub-samples by age group, race, and sex.

For further comparison, Figure 3 on page 24 of this report graphically compares the ranges of external locus of control responses of the withdrawn students' samples with CFCC professional personnel as well as all student group sub-samples by age group, race, and sex.

Table 14, on page 36 of this report, shows the plus-or-minus differences from the All CFCC Personnel internal and external locus of control means (internal:33) (external:7) for each of the withdrawn student sub-samples. Figures 4 and 5 on pages 26 & 28graphically present the plus-or-minus differences from the All CFCC Personnel Internal and external locus of control means for the withdrawn student sub-samples as well as the CFCC sub-samples and sub-samples of all other groups.

Students Dropping 2 or More Courses - Data Results

Appendix F presents all calculation figures of internal and external locus of control response means, corresponding percentages of internality and externality, and the plus-or-minus differences from the All CFCC Personnel means for each sub-sample of students who dropped two or more courses Term II, 1975-76.

As noted in Table 2, page 18 of this report, the percentage of responses received from students dropping two or more courses was 44%, considerably less than the 80-90% considered necessary in order to be able to make any valid generalizations from the data. With this in mind, calculations were prepared nevertheless.

The internal locus of control mean for the total sample of students dropping two or more courses was calculated as 31, two less than the All CFCC Personnel mean of 33. This mean of 31 out of 40 on internal responses represented 77.5% internality compared to 82.5% internality for all CFCC Personnel. The external response mean of 9 for students dropping two or more courses is two more than the All CFCC Personnel external response mean of 7 and represented 22.5% externality as compared to 17.5% externality expressed by All CFCC Personnel.

Table 16 of the following page of this report summarizes data on students dropping two or more courses' internality and externality by sub-samples.

Figure 8, which follows Table 16, graphically presents the internal locus of control response means of students dropping two or more courses and all of its sub-samples as compared to the internal locus of control response mean of the All CFCC Personnel sample.

TABLE 16

STUDENTS DROPPING 2 OR MORE COURSES - INTERNAL AND EXTERNAL
LOCUS OF CONTROL RESPONSE DATA
BY SELECTED SUB-SAMPLES

Sub-Sample	N	Internal Mean	% of Internality	Difference from CFCC Personnel Internal Mean (33)	External Mean	% of Externality	Difference from CFCC Personnel External Mean (7)
Aged 17-20	37	29	72.5%	- 4	11	27.5%	+ 4
21-30	18	32	80%	- 1	8	20%	+ 1
31 & Over	3	37	92.5%	+ 4	3	7.5%	- 4
White, Aged 17-20	27	31	77.5%	- 2	9	22.5%	+ 2
White, Aged 21-30	10	31	77.5%	- 2	9	22.5%	+ 2
White, Aged 31 & Over	2	38	95%	+ 5	2	5%	- 5
White, All Ages	39	32	80%	- 1	8	20%	+ 1
Black, Aged 17-20	8	25	62.5%	- 8	15	37.5%	+ 8
Black, Aged 21-30	8	32	80%	- 1	8	20%	+ 1
Black, Aged 31 & Over	1	37	92.5%	+ 4	3	7.5%	- 4
Black, All Ages	17	29	72.5%	- 4	11	27.5%	+ 4
Male, Aged 17-20	18	30	75%	- 3	10	25%	+ 3
Male, Aged 21-30	12	33	82.5%	0	7	17.5%	0
Male, Aged 31 & Over	2	38	95%	+ 5	2	5%	- 5
Male, All Ages	32	32	80%	- 1	8	20%	+ 1
Female, Aged 17-20	17	30	75%	- 3	10	25%	+ 3
Female, Aged 21-30	6	29	72.5%	- 4	11	27.5%	+ 4
Female, Aged 31 & Over	1	37	92.5%	+ 4	3	7.5%	- 4
Female, All Ages	24	30	75%	-3	10	25%	+ 3

A COMPARISON OF THE INTERNAL LOCUS OF CONTROL MEANS
OF STUDENTS DROPPING 2 OR MORE COURSES
WITH THE ALL-CFCC PERSONNEL MEAN

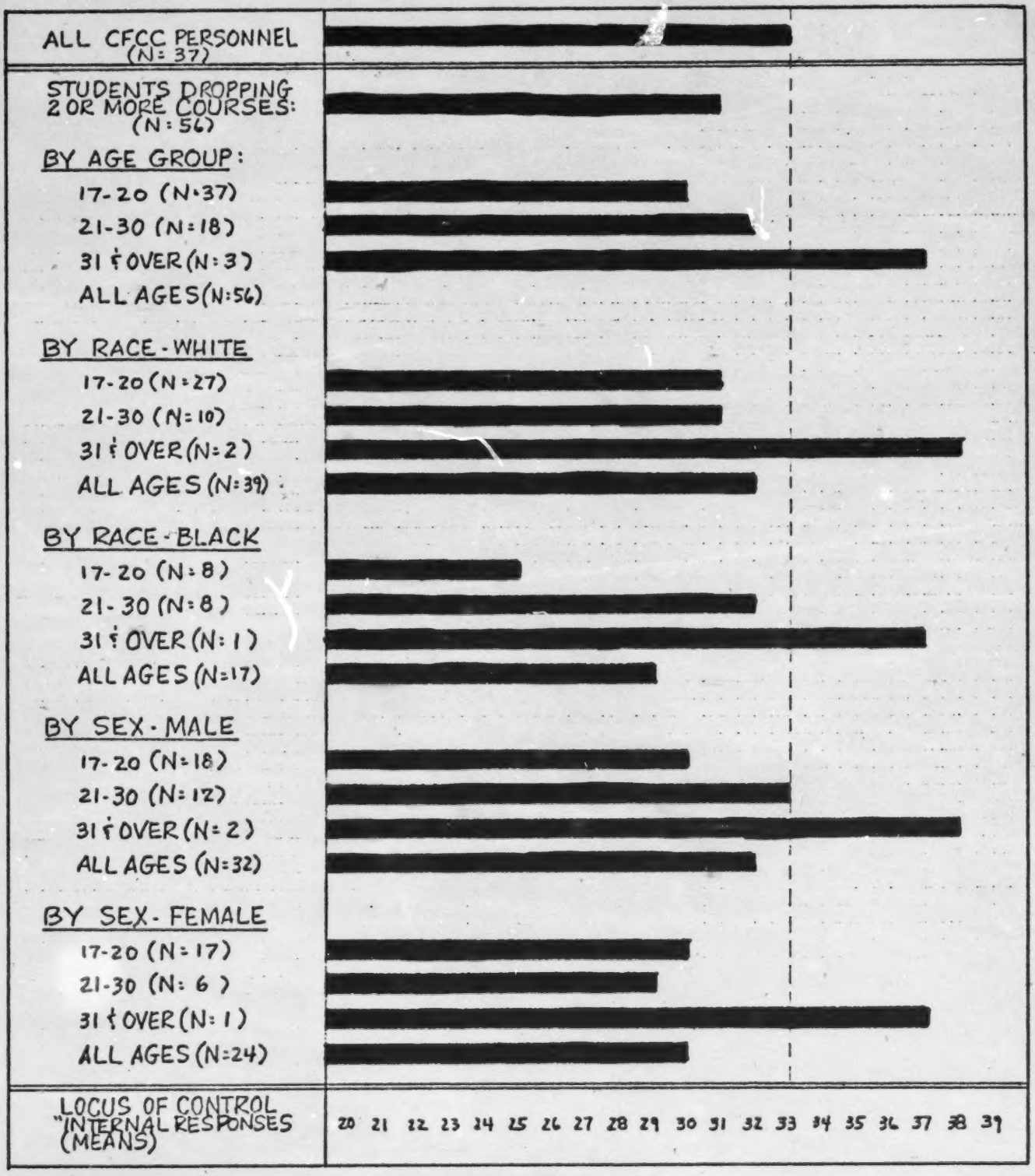


Figure 8

Table 17 below shows the ranges, medians, and means of the internal locus of control responses for the sample of students dropping two or more courses and selected sub-samples by age (17-20) and by race (aged 17-20).

TABLE 17

STUDENTS DROPPING 2 OR MORE COURSES
INTERNAL LOCUS OF CONTROL RESPONSE
RANGES, MEDIANS, AND MEANS
BY TOTAL SAMPLE AND TWO SELECTED SUB-SAMPLES
By Age - 17-20 - and By Race (Aged 17-20)

Group	N		Range	Median	Mean
Total Sample of Students Dropping 2 or More Courses	56		38-8	31.5	31
Aged 17-20	37		38-16	30	29
White, Aged 17-20	27		38-21	30	31
Black, Aged 17-20	8		35-16	25.5	25

Figure 2 on page 23 of this report graphically compares the ranges of internal locus of control responses of students dropping two or more courses' samples with CFCC professional personnel as well as the all student group sub-samples by age group, race, and sex.

For further comparison, Figure 3 on page 24 of this report graphically compares the ranges of external locus of control responses of students dropping two or more courses' samples with CFCC professional personnel as well as all student group sub-samples by age group, race, and sex.

Table 16, on page 40 of this report, shows the plus-or-minus differences from the All CFCC Personnel internal and external locus of control means (internal: 33) (external: 7) for each of the students dropping two or more courses student sub-samples. Figures 4 and 5, pp. 26 and 28, graphically present the plus-or-minus differences from the All CFCC Personnel internal and external locus of control means for the sub-samples of students dropping two or more courses as well as the CFCC sub-samples and the sub-

samples of all other groups.

Basic Education, High-Risk Students - Data Results

Appendix G presents all calculation figures of internal and external locus of control response means, corresponding percentages of internality and externality, and the plus-or-minus differences from the All CFCC Personnel means for each sub-sample of Basic Education, high-risk students enrolled Term III-A, 1975-76.

As noted on Table 2, page 18 of this report, the percentage of responses received from Basic Education students enrolled in that department's two sections of ENG 101 was 100%, which obviously was greater than the 80-90% considered necessary in order to be able to make any valid generalizations from the data.

The internal locus of control mean for the total sample of Basic Education students was calculated as 28, five less than the All CFCC Personnel mean of 33. This mean of 28 out of 40 on internal responses represented 70% internality compared to 82.5% internality for All CFCC Personnel. The external response mean of 12 for Basic Education students is five more than the All CFCC Personnel external response mean of 7 and represented 30% externality as compared to 17.5% externality expressed by All CFCC Personnel.

Table 18 on the following page of this report summarizes data on students enrolled in the Basic Education Department -- internality and externality by sub-samples.

Figure 9, which follows Table 18, graphically presents the internal locus of control response means of students in the Basic Education Department and all of its sub-samples as compared to the internal locus of control response mean of the All CFCC Personnel sample.

TABLE 18

BASIC EDUCATION STUDENTS' INTERNAL AND EXTERNAL
LOCUS OF CONTROL RESPONSE DATA
BY SELECTED SUB-SAMPLES

Sub-Sample	N	Internal Mean	% of Internality	Difference from CFCC Personnel Internal Mean (33)	External Mean	% of Externality	Difference from CFCC Personnel External Mean (7)
Aged 17-20	15	25	62.5%	- 8	15	37.5%	+ 8
21-30	17	28	70%	- 5	12	30%	+ 5
31 & Over	8	33	82.5%	0	7	17.5%	0
White, Aged 17-20	5	22	55%	-11	18	45%	+11
White, Aged 21-30	11	29	72.5%	- 4	11	27.5%	+ 4
White, Aged 31 & Over	8	33	82.5%	0	7	17.5%	0
White, All Ages	24	29	72.5%	- 4	11	27.5%	+ 4
Black, Aged 17-20	7	27	67.5%	- 6	13	32.5%	+ 6
Black, Aged 21-30	6	25	62.5%	- 8	15	37.5%	+ 8
Black, Aged 31 & Over	0	--	---	-	--	---	-
Black, All Ages	13	26	65%	- 7	14	35%	+ 7
Other, Aged 17-20	3	23	57.5%	-10	17	42.5%	+ 10
Male, Aged 17-20	8	26	65%	- 7	14	35%	+ 7
Male, Aged 21-30	12	30	75%	- 3	10	25%	+ 3
Male, Aged 31 & Over	8	33	82.5%	0	7	17.5%	0
Male, All Ages	28	30	75%	- 3	10	25%	+ 3
Female, Aged 17-20	7	23	57.5%	-10	17	42.5%	+10
Female, Aged 21-30	4	22	55%	- 9	18	45%	+ 9
Female, Aged 31 & Over	0	--	---	-	--	---	-
Female, All Ages	11	23	57.5%	-10	17	42.5%	+10

Figure 9

A COMPARISON OF THE INTERNAL LOCUS OF CONTROL MEANS
OF BASIC EDUCATION, HIGH-RISK STUDENTS
WITH THE ALL-CFCC PERSONNEL MEAN

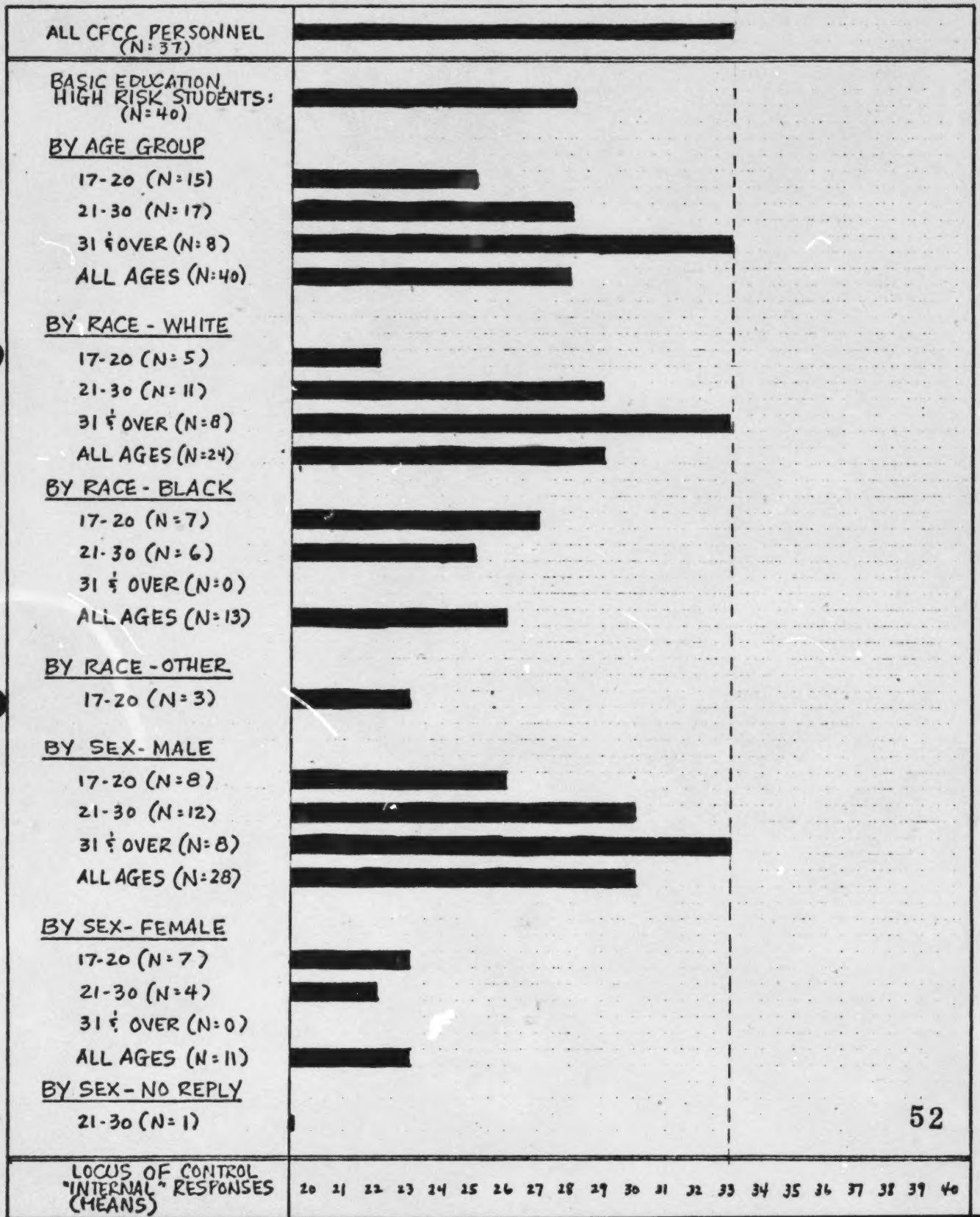


Table 19 below shows the ranges, medians, and means of the internal locus of control responses of the Basic Education student sample and selected sub-samples by age (17-20) and by race (aged 17-20).

TABLE 19

BASIC EDUCATION STUDENTS
INTERNAL LOCUS OF CONTROL RESPONSE
RANGES, MEDIANS, AND MEANS
BY TOTAL SAMPLE AND TWO SELECTED SUB-SAMPLES
By Age - 17-20 - and By Race (Aged 17-20)

Group	N		Range	Median	Mean
Total Sample of Basic Education Students	40		36-18	28	28
Aged 17-20	15		34-18	24	25
White, Aged 17-20	5		31-18	18	22
Black, Aged 17-20	7		34-22	28	27
Other, Aged 17-20	3		26-20	23	23

Figure 2 on page 23 of this report graphically compares the ranges of internal locus of control responses of Basic Education students with those of the All CFCC Personnel sample as well as with all student sub-samples by age group, race, and sex.

Figure 3 on page 24 of this report graphically compares the ranges of external locus of control responses of Basic Education students with those of the All CFCC Personnel sample as well as with all student sub-samples by age group, race, and sex.

Table 18 on page 44 of this report shows the plus-or-minus differences from the All CFCC Personnel internal and external locus of control means (internal: 33) (external: 7) for each of the Basic Education student samples. Figures 4 and 5 on pages 26 and 28 of this report graphically present the plus-or-minus differences from the All CFCC Personnel internal and external locus of control means for the Basic Education

student sub-samples as well as the CFCC sub-samples and the sub-samples of all other groups surveyed.

Table 20 below gives a comparison of all sampled 'groups' internal locus of control scores as they relate to the All-CFCC Personnel mean of 33.

TABLE 20

A COMPARISON OF ALL SAMPLED GROUPS' INTERNAL LOCUS OF CONTROL SCORES IN RELATIONSHIP TO ALL-CFCC PERSONNEL MEAN*

	Scores Above Mean		Scores at Mean		Scores Below Mean		Scores Below 30		Scores Below 25		Scores Below 20	
GROUP	N	%	N	%	N	%	N	%	N	%	N	%
All-CFCC Personnel (N=37)	16	43%	6	16%	15	41%	5	14%	3	8%	0	--
Basic Education Students (N=40)	9	22½%	2	5%	29	72½%	24	60%	12	30%	1	3%
May Graduates (N=25)	5	20%	5	20%	15	60%	10	40%	4	16%	2	8%
Withdrawals (N=38)	14	37%	4	11%	20	53%	11	29%	2	5%	0	--
Dropping 2 or More Courses (N=56)	23	41%	2	4%	31	55%	18	32%	8	14%	3	5%

* Derived from information found in Appendix H to this report.

Figure 10, found on page 48 of this report, graphically presents the above information as a comparison of the internal locus of control scores of all groups sampled as they related to the All-CFCC Personnel mean of 33. Figure 11, on page 49, compares the scores below 30, 25, and 20 (above) for all groups sampled.

FIGURE 10

A COMPARISON OF ALL SAMPLED GROUPS' INTERNAL LOCUS OF CONTROL SCORES IN RELATIONSHIP TO ALL-CFCC PERSONNEL MEAN

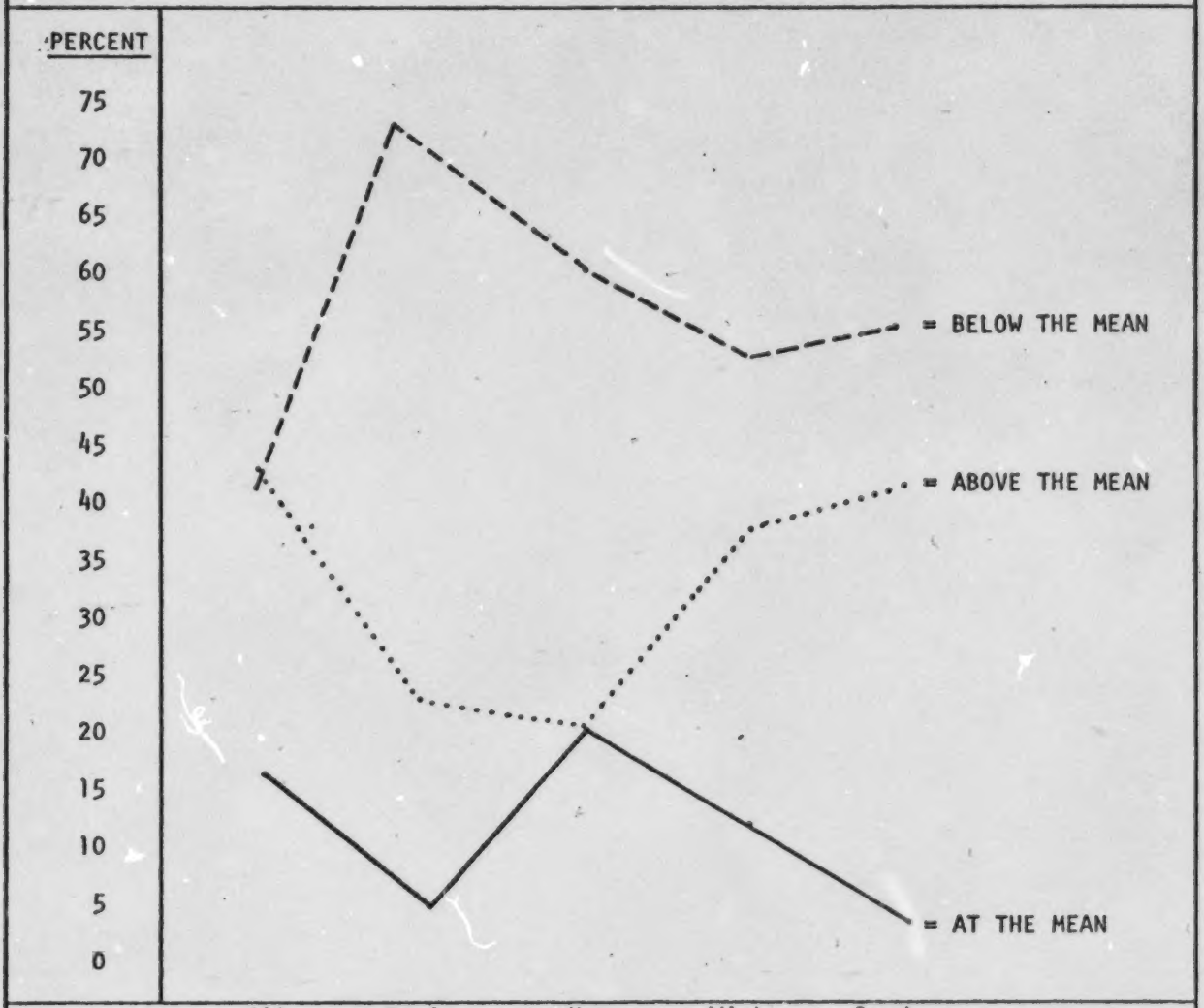
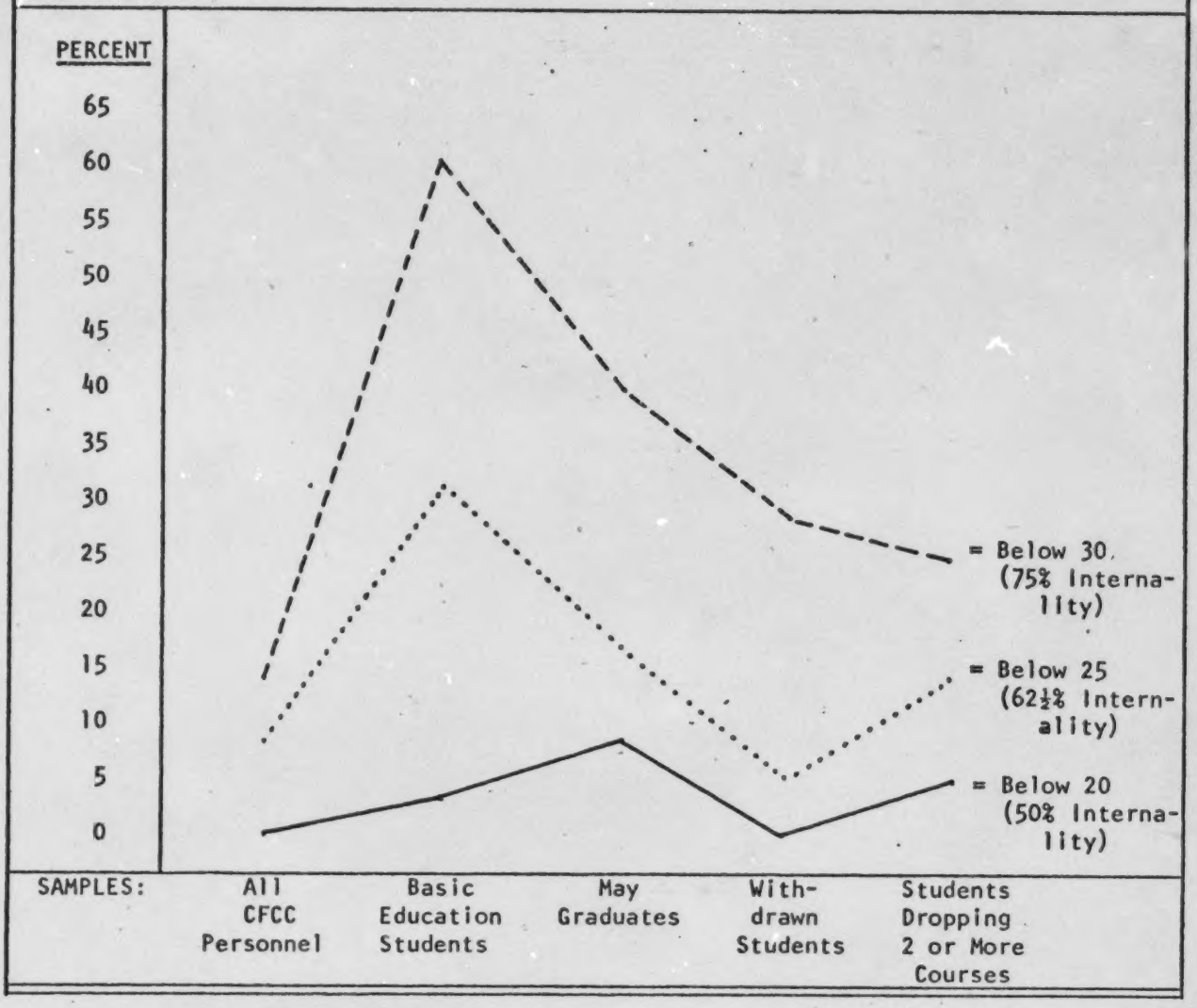


FIGURE 11

A COMPARISON OF ALL SAMPLED GROUPS' INTERNAL LOCUS OF CONTROL SCORES BELOW 30, 25, AND 20



The study attempted to answer eight questions (see page 12). Due to the low response percentages of three student groups, the first three of these questions could not be addressed. Research data that was considered valid, however, supplied the following:

<u>There is a difference between the internal locus of control mean of the All-CFCC Professional Personnel sample and --</u>

---new CFCC Basic Education, nontraditional, high-risk students.

---Basic Education students aged 17-20 and 21-30.

---White Basic Education students (all age groups).

---Black Basic Education students (all age groups).

---Male Basic Education students (all age groups).

---Female Basic Education students (all age groups).

---the Administrator, Counselor, Business-Social Science Faculty, and Natural Science Faculty sub-samples -- all of which were higher.

---the Division Directors and Fine Arts Faculty sub-samples -- both of which were lower.

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Discussion and Implications

Responses

As shown in Tables 1 and 2, pages 17 and 18, response percentages of two sampled groups were sufficient to make valid generalizations from all data derived: CFCC professional personnel (95 percent response) and Basic Education, high-risk students (100 percent response). CFCC personnel sub-samples had 100 percent response with the exception of administrators (83 percent) and natural sciences teaching faculty (80 percent). One person in each of these sub-samples did not respond.

No valid generalizations could be made from the data of any of the remaining groups sampled due to low response percentages (May graduates, 26 percent; withdrawn students, 40 percent; and students dropping two or more courses, 44 percent). Although data from these samples were processed, all were done with the realization that any overall findings would be inconclusive and unreliable. (Certain information regarding individual scores, however, could be presented as "Other Data" later in this report.) Therefore, the following discussion of the results of this study is limited to the All-CFCC Personnel sample and the Basic Education student sample.

Response Distribution by Age Groups

As shown in Table 3, page 18, the larger percentage of Basic Education student respondents was in the 21-30 age group -- only slighter higher than the 17-20 age group, which had two less students. In each of the other student samples, the larger percentages of respondents were aged 17-20. Comparison figures for the 17-20 age group were developed throughout the study inasmuch as this age group was represented by larger percentages and is the age group of the majority of CFCC students. Only the Basic Education student data, however, was considered valid.

Response Distribution by Sex

The distribution of responses from males and females was reasonably proportionate, as shown in Table 4, page 19. The Basic Education student sample (N=40) showed the greatest difference, with 28 males and 11 females responding. (One student was not identified by sex.) Ninety of the total 159 student respondents were male and 68 were female. Comparison figures by sex were developed, although only the Basic Education student data was considered valid.

Response Distribution by Race

White respondents far outnumbered black in each of the student groups sampled even though CFCC's minority enrollment was 20 percent in Term II, 1975-76 (Weaver, 1976). (See Table 5, page 19.) The difference was less pronounced in the Basic Education student sample (Whites, 24; Blacks, 13; Other, 3). The Basic Education Department generally serves a large percentage of minority students due to its purpose of serving the nontraditional, high-risk student. Comparison figures by race, aged 17-20, were developed, although only the Basic Education student data was considered valid.

Internal Locus of Control Means

As was assumed, the All-CFCC professional personnel sample and most of its sub-samples proved to have high internal locus of control orientation. (See Appendix C.) The All-CFCC Personnel mean, 33, was used as the basis for this comparative study. Considering the maximum possible of 40, the mean represented an expression of 82.5 percent internality. The means of three sub-samples (All-Teaching Faculty, Applied Sciences Faculty, and Basic Education Department Faculty) coincided with the All-CFCC Personnel Mean. The means of four personnel sub-samples were above the All-CFCC Personnel mean (Counselors and Business-Social Sciences Faculty, 35, 87½ percent internality; and Administrators and Natural Sciences Faculty, 34, 85 percent internality). The Division Directors sub-sample mean(31) was slightly below the All-CFCC Personnel mean and represented 77½ percent

Internality. The only sharp contrast within the All-CFCC Personnel sample was that of the Fine Arts Faculty sub-sample with a considerably lower mean of 28 (70 percent internality).

An overall implication of this portion of the study supported the belief that CFCC students are being served by administrators, division directors, counselors, and teaching faculty that are very internally oriented.

Basic Education, High-risk Students (See Appendix G.)

Total Sample. As was assumed, the total Basic Education student sample proved to be considerably less internally-oriented than the CFCC professional personnel serving it. (Note: Although the assumption that the Basic Education students would show less internal locus of control orientation than May graduates was supported by the data, it could not be considered valid due to the low percentage of response from May graduates.)

The mean of the total sample of Basic Education students was calculated as 28, representing 70 percent internality, a difference of five from the All-CFCC Personnel mean, 33, which represented 82.5 percent internality. However, the Basic Education student mean was considerably lower than four of the CFCC personnel sub-samples, whose means ran as high as 35 (87½ percent internality), and was the same as the only low CFCC personnel sub-sample, Fine Arts Faculty.

A valid implication of this data was that nontraditional, high-risk Basic Education students as a total group, are not highly internally oriented, yet are being served by CFCC personnel who are highly internally oriented.

Basic Education Student Sub-sample Aged 17-20

As was assumed, the sub-sample aged 17-20 proved to be considerably less internally-oriented than the CFCC personnel sample.

The mean of the Basic Education student sub-sample aged 17-20 (25) was more dramatic in its difference from the All-CFCC Personnel mean than was the total Basic Education student sample. This mean of 25 represented only 62½ percent

Internal locus of control orientation compared to the 82.5 percent of the All-CFCC Personnel sample and as high as the 87½ percent and 85 percent of four of the personnel sub-samples.

A valid implication of this data was that nontraditional, high-risk, Basic Education students aged 17-20 are only slightly internally oriented, yet are being served by CFCC personnel who are considerably more internally oriented.

White Basic Education Student Sub-sample Aged 17-20

The mean of the white Basic Education student sub-sample aged 17-20 was even more dramatic. Its mean of 22 represented only 55 percent internality compared to the 82.5 percent of the All-CFCC Personnel sample and the 87½ and 85 percent of four of its sub-samples.

A valid implication of this data was that white, nontraditional, high-risk Basic Education students aged 17-20 are nearly equal in internal-external locus of control orientation yet they are being served by CFCC personnel who are far more internally oriented than they.

Black Basic Education Student Sub-sample Aged 17-20

As was assumed, minority students showed much less internality than CFCC personnel.

The mean of the black sub-sample aged 17-20 (27), although not as extreme as that of the white student sub-sample, was nevertheless considerably lower than the All-CFCC Personnel mean. The mean of 27 represented 67.5 percent internal locus of control orientation as compared to the 82.5 percent of the All-CFCC Personnel sample and the 87½ and 85 percent of four of its sub-samples. (The mean of three minority students identified as "other" was 23, or 57½ percent internality.)

A valid implication of this data was that black, nontraditional, high-risk students (and other minority students) aged 17-20, are considerably less internally oriented than the CFCC personnel who serve them.

Male Basic Education Student Sub-sample Aged 17-20

The mean of the male Basic Education student sub-sample aged 17-20 (26)

was considerably lower than the All-CFCC Personnel mean. The mean of 26 represented 65 percent internality compared to the 82.5 percent of the All-CFCC Personnel sample and the 87½ and 85 percent of four of its sub-samples.

A valid implication of this data was that male nontraditional, high-risk Basic Education students aged 17-20 are considerably less internally oriented than the CFCC personnel who serve them.

Female Basic Education Student Sub-sample Aged 17-20

The mean of the female Basic Education student sub-sample aged 17-20 (23) was more dramatically lower than the All-CFCC Personnel mean. The mean of 23 represented 57½ percent internal locus of control orientation compared to the 82½ percent of the All-CFCC Personnel sample and the 87½ and 85 percent of four of its sub-samples.

A valid implication of this data was that female nontraditional, high-risk Basic Education students aged 17-20 are far less internally oriented than the CFCC personnel who serve them.

Ranges of Scores (See Table 7, page 22, and Figure 2, Page 23)

As was assumed, most CFCC Personnel sub-samples had very slight ranges of scores. With the exception of three sub-samples, the personnel sub-samples showed differences in ranges from only 6 (Basic Education Faculty, 31-37); 7 (Administrators, 31-38; Business-Social Sciences Faculty, 31-38; and Natural Sciences Faculty, 30-37); or 8 (Counselors, 30-38; and Applied Sciences Faculty, 29-37). The Fine Arts Faculty range showed a difference of 16 and both the Division Directors and All-Teaching Faculty sub-samples showed differences of 17. (Fine Arts Faculty, 21-37; Division Directors, 21-38; and All-Teaching Faculty, 21-38.) Consequently, the All-CFCC Personnel sample's range of scores was from 21-38, a difference of 17, due to the extremes of these last three sub-samples.

The differences in the range of scores of the Basic Education student

sample and its sub-samples usually were greater than that of most of the CFCC personnel sub-samples. (Total sample 18; aged 17-20, 16; white, aged 17-20, 13; black, aged 17-20, 12; and "other" aged 17-20, 6.)

However, of more importance was the fact that the upper and lower scores of the Basic Education student sample and its sub-samples were lower than the CFCC personnel sample and its sub-samples (with one exception -- the lower limit of black Basic Education students aged 17-20 was one score higher than that of the All-CFCC personnel range) -- total sample, 36-18; aged 17-20, 34-18; white aged 17-20, 31-18; black aged 17-20, 34-22; and other minoriities aged 17-20, 26-20.

A valid interpretation of the data was that CFCC personnel had ranges of scores that were higher than the Basic Education, high-risk students they serve and that none of the CFCC personnel scored as low as the lower scores in the Basic Education samples' ranges of scores.

Scores in Relationship to Mean (See Appendix H and Figures 10 and 11, pages 48-49.)

Fifty-nine percent of the CFCC personnel had internal locus of control scores at or above the All-CFCC Personnel mean (33). Of the 15 personnel scoring below the mean, ten scored between the mean, 33, and 30 (75 percent internality). Five scored below 30; three of this five (8 percent of the total sample) scored below 25. None scored 20 or below (50 percent internality). Thus, 87 percent of CFCC personnel scored between 30-40 on the ANS-IE instrument (75-100% internality); 43 percent scored above the mean; and 16 percent scored at the mean.

Therefore, it could be stated with validity that the percentage of individual CFCC personnel scores was extremely high in its reflection of internal locus of control orientation of these personnel.

In comparison, the opposite could be stated about the percentage of Basic Education students (N=40) scores. Although nine students (22½ percent) scored above the mean, only two (five percent) scored at the mean, with 72½ percent scoring below the mean. Sixty percent (N=24) of the Basic Education students scored below 30; 30 percent (N=12) scored below 25; and 3 percent (N=1) scored below 20. Again,

a valid implication was apparent: CFCC's Basic Education students of all ages are far less internally oriented than are the CFCC personnel serving them, as shown by the distribution of their individual scores.

Other Data

Although the data from the other three student groups surveyed could not be considered valid due to low response percentages, it was felt that certain information regarding individual scores of students in these groups should be mentioned. (See Table 20, page 47, and Figures 10 and 11, pages 48 and 49.) Even though relatively few students in these groups were motivated to participate in the study, the scores of those individuals who did respond show that many of these students are far less internally oriented than are the CFCC personnel attempting to serve them. Scoring less than the All-CFCC Personnel mean were 60 percent (N=15) of the May graduate sample; 53 percent (N=20) of the withdrawn students sample; and 55 percent (N=31) of the students who dropped two or more courses sample.

Scoring below 30 (75 percent internality) were 40 percent (N=10) of the May graduates; 29 percent (N=11) of the withdrawn students; and 32 percent (N=18) of the students dropping two or more courses.

Scoring below 25 (62½ percent internality) were 16 percent (N=4) of the May graduates; 5 percent (N=2) of the withdrawn students; and 14 percent (N=8) of those dropping two or more courses.

Eight percent (N=2) of the May graduate respondents and 5 percent (N=3) of those dropping two or more courses scored below 20 (50 percent internality).

Considering <u>all</u> students responding in the study, including Basic Education students, two scored 19 (47½ percent internality); five scored 18 (45 percent internality); one scored 17 (42½ percent internality); one scored 16 (40 percent internality); and one scored 8 (20 percent internality).

Obviously, even though most of the data on three of the student groups was invalid, individual responses show that large numbers of CFCC students express far less internal locus of control than the great majority of CFCC personnel paid

to serve them.

RECOMMENDATIONS

1. Central Florida Community College administrators, division directors, counselors, and teaching faculty should be made aware of the Locus of Control theory as it applies to their students and the motivation of these students. This could be accomplished by the administration's sponsorship of a workshop dealing with the concepts of Locus of Control, "Improving Student Motivation". Such workshops are being conducted successfully by such persons as Dr. John E. Roueche, a national lecturer in the Nova University Ed.D. Program for Community College Faculty. Dr. Roueche, a community college curriculum expert, has been instrumental in the further development of Rotter's Social Learning Theory related to one's locus of control orientation and recently published (with Oscar G. Mink) a text, Improving Student Motivation. Such a workshop would not only make CFCC personnel aware of the locus of control concepts but also teach them how to help develop an internal locus of control orientation in their students -- one key to facilitating student success. The workshop could help those CFCC personnel who scored low themselves on internality to realize the dynamics of the theory in their own lives and continued personal growth.

2. Inasmuch as CFCC continues to enroll increasing numbers of nontraditional, high-risk students, counselors and Basic Education Department faculty members should develop intensive procedures to identify and to serve such students who demonstrate low internal locus of control orientation. Data from this study verified that the greater percentage of these students have low internal locus of control orientations. Counselors could offer group counseling for such students, using materials such as Confronting Student Attitudes, by John E. Roueche and Oscar G. Mink, which helps aid externally oriented students in the realization of control in their lives and in the expectation of success rather than failure in their college work. Basic Education Department staff members could continue, yet intensify, their efforts to identify

these students by use of the ANS-IE and to help these students realize their change possibilities. (The self-study unit, Improving Student Motivation, by Roueche and Mink, would be beneficial to counselors and Basic Education Department faculty in regards to the above recommendation. It is reasonably priced and provides an understanding of the concepts of locus of control, success expectancy, and change techniques for both teaching faculty and counselors.)

3. Counselors should identify other externally oriented (but non-Basic Education students) entering the college, by administration of the ANS-IE during summer orientation sessions for new students. Students identified as externals could then be invited into group sessions as described in #2 above in an effort to facilitate these students' chances of college success.

4. Counselors should use the ANS-IE in individual counseling with students who come to them for a wide range of problems to determine if an external locus of control might have anything to do with their lack of problem solving technique and in their lack of success in dealing with such situations in their lives.

5. Faculty, once taught the locus of control concepts and techniques for dealing with externally oriented students, should use the ANS-IE to determine which students in their classes express an external locus of control orientation. They could then use the newly-learned techniques with such students in an effort to serve better all of the students entrusted to them.

FURTHER STUDIES

1. Inasmuch as the procedures used in the current study failed to develop sufficient responses from three student groups (graduates, withdrawals, and students dropping two or more courses), it is felt that steps should be taken to secure sufficient sampling from each of these groups to complete the comparisons originally intended. This could be accomplished as follows:

   a. A sample of graduates could complete the ANS-IE Opinion Survey as part of their graduation application process.

b. A sample of students withdrawing from CFCC could complete the survey as part of the withdrawal process.

c. A sample of students dropping two or more courses could be asked by their counselors to complete the survey.

2. To validate further the results of the present study, newly-enrolled Basic Education, high-risk students should be given the survey, as should another sample of CFCC teaching faculty.

APPENDIX

APPENDIX A

INSTRUCTIONS:

Below are a number of questions about various topics. They have been collected from different groups of people and represent a variety of opinions. There are no right or wrong answers to this questionnaire, we are only interested in your opinions on these questions. Please darken the appropriate square, "yes" or "no", for each question below.

1. Do you believe that most problems will solve themselves if you just don't fool with them? ☐ YES ☐ NO
2. Do you believe that you can stop yourself from catching a cold? ☐ YES ☐ NO
3. Are some people just born lucky? ☐ YES ☐ NO
4. Most of the time do you feel that getting good grades meant a great deal to you? ☐ YES ☐ NO
5. Are you often blamed for things that just aren't your fault? ☐ YES ☐ NO
6. Do you believe that if somebody studies hard enough he or she can pass any subject? ☐ YES ☐ NO
7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway? ☐ YES ☐ NO
8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do? ☐ YES ☐ NO
9. Do you feel that most of the time parents listen to what their children have to say? ☐ YES ☐ NO
10. Do you believe that wishing can make good things happen? ☐ YES ☐ NO
11. When you get punished does it usually seem it's for no good reason at all? ☐ YES ☐ NO
12. Most of the time do you find it hard to change a friend's (mind) opinion? ☐ YES ☐ NO
13. Do you think that cheering more than luck helps a team to win? ☐ YES ☐ NO
14. Did you feel that it was nearly impossible to change your parent's mind about anything? ☐ YES ☐ NO
15. Do you believe that parents should allow children to make most of their own decisions? ☐ YES ☐ NO
16. Do you feel that when you do something wrong there's very little you can do to make it right? ☐ YES ☐ NO
17. Do you believe that most people are just born good at sports? ☐ YES ☐ NO
18. Are most of the other people your age stronger than you are? ☐ YES ☐ NO
19. Do you feel that one of the best ways to handle most problems is just not to think about them? ☐ YES ☐ NO
20. Do you feel that you have a lot of choice in deciding who your friends are? ☐ YES ☐ NO
21. If you find a four leaf clover, do you believe that it might bring you good luck? ☐ YES ☐ NO
22. Did you often feel that whether or not you did your homework had much to do with what kind of grades you got? ☐ YES ☐ NO
23. Do you feel that when a person your age is angry at you, there's little you can do to stop him or her? ☐ YES ☐ NO
24. Have you ever had a good luck charm? ☐ YES ☐ NO
25. Do you believe that whether or not people like you depends on how you act? ☐ YES ☐ NO

(PLEASE TURN OVER FOR #26-40)

26. Did your parents usually help you if you asked them to? ☐ YES ☐ NO

27. Have you felt that when people were angry with you it was usually for no reason at all? ☐ YES ☐ NO

28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today? ☐ YES ☐ NO

29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them? ☐ YES ☐ NO

30. Do you think that people can get their own way if they just keep trying? ☐ YES ☐ NO

31. Most of the time do you find it useless to try to get your own way at home? ☐ YES ☐ NO

32. Do you feel that when good things happen they happen because of hard work? ☐ YES ☐ NO

33. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters? ☐ YES ☐ NO

34. Do you feel that it's easy to get friends to do what you want them to do? ☐ YES ☐ NO

35. Do you usually feel that you have little to say about what you get to eat at home? ☐ YES ☐ NO

36. Do you feel that when someone doesn't like you there's little you can do about it? ☐ YES ☐ NO

37. Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you are? ☐ YES ☐ NO

38. Are you the kind of person who believes that planning ahead makes things turn out better? ☐ YES ☐ NO

39. Most of the time, do you feel that you have little to say about what your family decides to do? ☐ YES ☐ NO

40. Do you think it's better to be smart than to be lucky? ☐ YES ☐ NO

ALSO!

PLEASE COMPLETE THE FOLLOWING:

____ MALE ____FEMALE ____AGE RACE: ____CAUCASION ____BLACK ____OTHER

PLEASE RETURN THE OPINION SURVEY FORM TO:

TOM WEAVER, COUNSELOR, COUNSELING DEPARTMENT. CFCC

You are one of a small percentage of CFCC students chosen to help!

Please take 10 minutes and complete the enclosed OPINION SURVEY. There are no "right" or "wrong" answers! Please return the form in the enclosed envelope as soon as possible! DO NOT SIGN YOUR NAME!

We hope that the results of this survey will help CFCC serve all of its students better!

Thank you very much!

Sincerely,

Tom Weaver, Counselor
Central Florida Community College

APPENDIX C

LOCUS OF CONTROL INTERNAL AND EXTERNAL RESPONSES
OF CFCC PERSONNEL SUB-SAMPLES
Means, Corresponding Percentages,
and Differences from All-CFCC Personnel Mean

			INTERNAL RESPONSES			EXTERNAL RESPONSES			
SUB-SAMPLE	N	ΣX	Mean	Corresponding Percentage of Internality Expressed	Difference from All-CFCC Personnel Mean	ΣX	Mean	Corresponding Percentage of Externality Expressed	Difference from All-CFCC Personnel Mean
Administration	5	172	34	85%	+1	28	6	15%	-1
Division Directors	4	123	31	77.5%	-2	37	9	22.5%	+2
Counselors	5	175	35	87.5%	+2	25	5	12.5%	-2
All Teaching Faculty	23	750	33	82.5%	0	170	7	17.5%	0
--Bus.& Soc. Sci.	(5)	(175)	(35)	87.5%	+2	(25)	(5)	12.5%	-2
--Natural Sci.	(4)	(135)	(34)	85%	+1	(25)	(6)	15%	-1
--Applied Sci.	(5)	(167)	(33)	82.5%	0	(33)	(7)	17.5%	0
--Basic Educ.	(4)	(133)	(33)	82.5%	0	(27)	(7)	17.5%	0
--Fine Arts	(5)	(140)	(28)	70%	-5	(60)	(12)	30%	+5
ALL CFCC PERSONNEL	37	1220	33	82.5%	--	260	7	17.5%	--

LOCUS OF CONTROL INTERNAL AND EXTERNAL RESPONSES OF MAY GRADUATES

Means, Corresponding Percentages, and Differences from All-CFCC Personnel Mean

	INTERNAL RESPONSES					EXTERNAL RESPONSES			
	N	ΣX	Mean	Corresponding Percentage of Internality Expressed	Difference from All-CFCC Personnel Mean	ΣX	Mean	Corresponding Percentage of Externality Expressed	Difference from All-CFCC Personnel Mean
TOTAL SAMPLE	25	743	30	75%	-3	257	10	25%	+3
Aged 17-20	16	450	28	70%	-5	190	12	30%	+5
Aged 21-30	8	257	32	80%	-1	63	8	20%	+1
Aged 31 & Over	1	36	36	90%	+3	4	4	10%	-3
BY RACE - WHITE									
Aged 17-20	15	450	30	75%	-3	150	10	25%	+3
Aged 21-30	8	257	32	80%	-1	63	8	20%	+1
Aged 31 & Over	0	---	--	---	--	---	--	---	--
All Ages	23	707	31	77.5%	-2	213	9	22.5%	+2
BY RACE - BLACK									
Aged 17-20	1	27	27	67.5%	-6	13	13	32.5%	+6
Aged 21-30	0	---	--	---	--	---	--	---	--
Aged 31 & Over	1	36	36	90%	+3	4	4	10%	-3
All Ages	2	63	32	80%	-1	17	8	20%	+1
BY SEX - MALE									
Aged 17-20	9	241	27	67.5%	-6	119	13	32.5%	+6
Aged 21-30	4	133	33	82.5%	0	27	7	17.5%	0
Aged 31 & Over	0	---	--	---	--	---	--	---	--
All Ages	13	374	29	72.5%	-4	146	11	27.5%	+4
BY SEX - FEMALE									
Aged 17-20	7	209	30	75%	-3	71	10	25%	+3
Aged 21-30	4	124	31	77.5%	-2	36	9	22.5%	+2
Aged 31 & Over	1	36	36	90%	+3	4	4	10%	-3
FOR COMPARISON: ALL CFCC PERSONNEL	37	1220	33	82.5%	--	260	7	17.5%	--

LOCUS OF CONTROL INTERNAL AND EXTERNAL RESPONSES
OF STUDENTS WITHDRAWING FROM CFCC
Means, Corresponding Percentages,
and Differences from All-CFCC Personnel Mean

	INTERNAL RESPONSES					EXTERNAL RESPONSES			
	N	ΣX	Mean	Corresponding Percentage of Internality Expressed	Difference from All-CFCC Personnel Mean	ΣX	Mean	Corresponding Percentage of Externality Expressed	Difference from All-CFCC Personnel Mean
TOTAL SAMPLE	38	1195	31	77.5%	-2	325	9	22.5%	+2
Aged 17-20	18	561	31	77.5%	-2	159	9	22.5%	+2
Aged 21-30	14	440	31	77.5%	-2	120	9	22.5%	+2
Aged 31 & Over	6	194	32	80%	-1	46	8	20%	+1
BY RACE - WHITE									
Aged 17-20	17	526	31	77.5%	-2	154	9	22.5%	+2
Aged 21-30	8	258	32	80%	-1	62	8	20%	+1
Aged 31 & Over	6	194	32	80%	-1	46	8	20%	+1
All Ages	21	945	32	80%	-1	255	8	20%	+1
BY RACE - BLACK									
Aged 17-20	1	35	35	87.5%	+2	5	5	12.5%	-2
Aged 21-30	6	182	30	75%	-3	58	10	25%	+3
Aged 31 & Over	0	---	--	---	--	--	--	---	--
All Ages	7	217	31	77.5%	-2	63	9	22.5%	+2
BY SEX - MALE									
Aged 17-20	6	187	31	77.5%	-2	53	9	22.5%	+2
Aged 21-30	6	187	31	77.5%	-2	53	9	22.5%	+2
Aged 31 & Over	5	166	33	82.5%	0	34	7	17.5%	0
All Ages	17	540	32	80%	-1	140	8	20%	+1
BY SEX - FEMALE									
Aged 17-20	12	374	31	77.5%	-2	106	9	22.5%	+2
Aged 21-30	8	253	32	80%	-1	67	8	20%	+1
Aged 31 & Over	1	28	28	70%	-5	12	12	30%	+5
FOR COMPARISON:									
ALL CFCC PERSONNEL	37	1220	33	82.5%	--	260	7	17.5%	--

LOCUS OF CONTROL INTERNAL AND EXTERNAL RESPONSES
OF STUDENTS DROPPING 2 OR MORE COURSES
Means, Corresponding Percentages,
and Differences from All-CFCC Personnel Mean

	INTERNAL RESPONSES					EXTERNAL RESPONSES			
	N	ΣX	Mean	Corresponding Percentage of Internality Expressed	Difference from All-CFCC Personnel Mean	ΣX	Mean	Corresponding Percentage of Externality Expressed	Difference from All-CFCC Personnel Mean
TOTAL SAMPLE	56	1723	31	77.5%	-2	517	9	22.5%	+2
Aged 17-20	37	1043	29	72.5%	-4	437	11	27.5%	+4
Aged 21-30	18	568	32	80%	-1	152	8	20%	+1
Aged 31 & Over	3	112	37	92.5%	+4	8	3	7.5%	-4
BY RACE - WHITE									
Aged 17-20	27	842	31	77.5%	-2	238	9	22.5%	+2
Aged 21-30	10	314	31	77.5%	-2	86	9	22.5%	+2
Aged 31 & Over	2	75	38	95%	+5	5	2	5%	-5
All Ages	39	1231	32	80%	-1	329	8	20%	+1
BY RACE - BLACK									
Aged 17-20	8	201	25	62.5%	-8	119	15	37.5%	+8
Aged 21-30	8	254	32	80%	-1	66	8	20%	+1
Aged 31 & Over	1	37	37	92.5%	+4	3	3	7.5%	-4
All Ages	17	492	29	72.5%	-4	188	11	27.5%	+4
BY SEX - MALE									
Aged 17-20	18	537	30	75%	-3	183	10	25%	+3
Aged 21-30	12	396	33	82.5%	0	84	7	17.5%	0
Aged 31 & Over	2	75	38	95%	+5	5	2	5%	-5
All Ages	32	1008	32	80%	-1	272	8	20%	+1
BY SEX - FEMALE									
Aged 17-20	17	506	30	75%	-3	174	10	25%	+3
Aged 21-30	6	172	29	72.5%	-4	68	11	27.5%	+4
Aged 31 & Over	1	37	37	92.5%	+4	3	3	7.5%	-4
All Ages	24	715	30	75%	-3	245	10	25%	+3
FOR COMPARISON: ALL CFCC PERSONNEL	37	1220	33	82.5%	--	260	7	17.5%	--

LOCUS OF CONTROL INTERNAL AND EXTERNAL RESPONSES
OF BASIC EDUCATION, HIGH-RISK STUDENTS
Means, Corresponding Percentages,
and Differences from All-CFCC Personnel Mean

	INTERNAL RESPONSES					EXTERNAL RESPONSES			
	N	ΣX	Mean	Corresponding Percentage of Internality Expressed	Difference from All-CFCC Personnel Mean	ΣX	Mean	Corresponding Percentage of Externality Expressed	Difference from All-CFCC Personnel Mean
TOTAL SAMPLE	40	1102	28	70%	-5	498	12	30%	+5
Aged 17-20	15	370	25	62.5%	-8	230	15	37.5%	+8
Aged 21-30	17	470	28	70%	-5	210	12	30%	+5
Aged 31 & Over	8	262	33	82.5%	0	58	7	17.5%	0
BY RACE - WHITE									
Aged 17-20	5	109	22	55%	-11	91	18	45%	+11
Aged 21-30	11	323	29	72.5%	-4	117	11	27.5%	+4
Aged 31 & Over	8	262	33	82.5%	0	58	7	17.5%	0
All Ages	24	694	29	72.5%	-4	266	11	27.5%	+4
BY RACE - BLACK									
Aged 17-20	7	192	27	67.5%	-6	88	13	32.5%	+6
Aged 21-30	6	147	25	62.5%	-8	93	15	37.5%	+8
Aged 31 & Over	0	---	--	---	--	--	--	---	--
All Ages	13	339	26	65%	-7	181	14	35%	+7
BY RACE - OTHER									
Aged 17-20	3	69	23	57.5%	-10	51	17	42.5%	+10
BY SEX - MALE									
Aged 17-20	8	207	26	65%	-7	113	14	35%	+7
Aged 21-30	12	364	30	75%	-3	116	10	25%	+3
Aged 31 & Over	8	262	33	82.5%	0	58	7	17.5%	0
All Ages	28	833	30	75%	-3	287	10	25%	+3
BY SEX - FEMALE									
Aged 17-20	7	163	23	57.5%	-10	117	17	42.5%	+10
Aged 21-30	4	88	22	55%	-9	72	18	45%	+9
Aged 31 & Over	0	---	--	---	--	---	--	---	--
All Ages	11	251	23	57.5%	-10	189	17	42.5%	+10
SEX NOT IDENTIFIED	1	18	18	45%	-15	22	22	55%	+15
FOR COMPARISON: ALL CFCC PERSONNEL	37	1220	33	82.5%	--	260	7	17.5%	--

APPENDIX H

INTERNAL LOCUS OF CONTROL SCORES OF ALL GROUPS SAMPLED

All-CFCC Professional Personnel (N=37)		Basic Education, High-Risk Students (N=40)		May Graduates (N=25)		With-drawn Students (N=38)		Students Dropping 2 or More Courses (N=56)	
Score	N	Score	N	Score	N	Score	N	Score	N
38	8	36	1	36	3	39	1	38	4
37	4	35	4	34	2	36	3	37	2
35	3	34	4	33	5	35	6	36	7
34	1	33	2	32	1	34	4	35	7
33	6	32	1	31	3	33	4	34	3
32	2	31	2	30	1	32	4	33	2
31	6	30	2	29	1	31	3	32	3
30	2	29	3	28	1	30	2	31	4
29	1	28	3	27	3	29	1	30	6
27	1	27	1	26	1	28	2	29	3
23	1	26	2	23	1	27	4	28	4
21	2	25	3	22	1	26	1	27	2
		24	1	19	2	25	1	25	1
		23	1			23	1	24	1
		22	4			22	1	23	2
		20	1					22	1
		18	5					21	1
								17	1
								16	1
								8	1

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